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O F

Whatever is most Curious and Remarkable
throughout the WORLD;

Whether relating to its
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NOES, CATARACTS, HOT and COLD SPRINGS,
A N D

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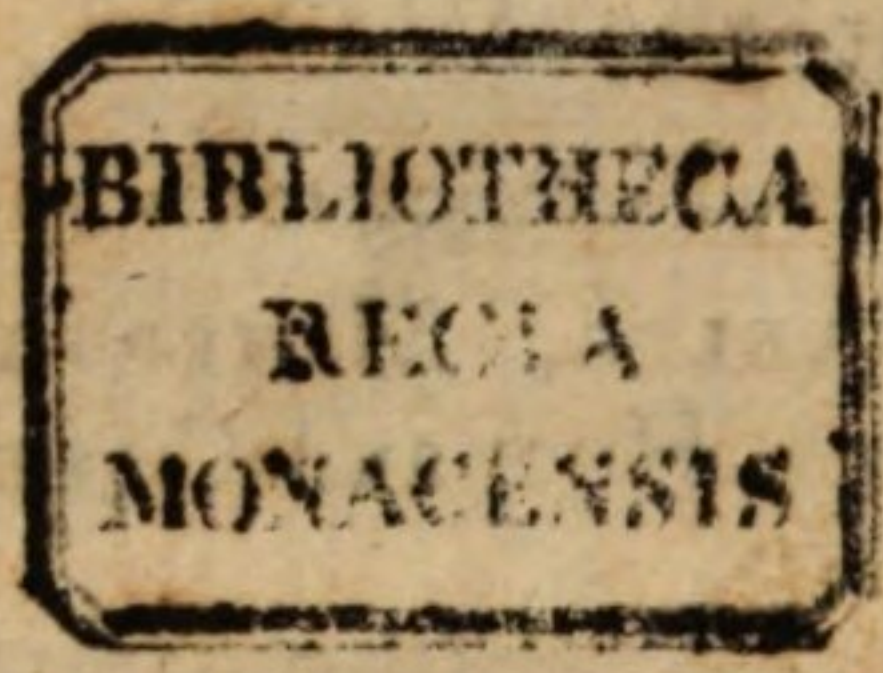
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THE
WONDERS
OF
NATURE AND ART.

CHAP. II.
OF NORTH AMERICA.

WE have already given a view of what is most remarkable in the South part of this continent, and shall now proceed to the North, which lies between the tenth and the eighteenth degrees of north latitude, and for the most part between the longitudes of 48 and 130 degrees, west from the meridian of London, it being about 4200 miles from north to south, and in some places no less than 5000 from east to west. The greatest part of this vast extent of territory is at present possessed by the subjects of his Britannic majesty, and the original natives, usually called Indians, who are much more numerous than the English. Indeed, the northern part is for the space of thirty degrees so cold as to be scarce inhabitable by any Europeans, and there it must be confessed that our claim to it is only nominal. The breadth of this country, from east

to west in those northern regions is much greater than what we have mentioned, it being found, by the discoveries of the Russians, that the northern coast of America extends westward very near to Siberia, and that the coast which thus reaches almost to Asia, is much more fertile than the barren countries of Kamtschatka.

UNDER this division of the American continent are comprehended, beginning at the south, Mexico or New Spain, New Mexico, Louisiana, and the peninsula of California, all which belong to Spain: Florida, Georgia, Carolina, Virginia, Maryland, Pensylvania, New Jersey, New York, New England, Nova Scotia, and Canada, which last comprehends the interior country on the back of several of our settlements, and these countries at present belong to Great Britain, and the Indians, the original inhabitants, who consist of numerous tribes. Besides these, there are the extensive tracts in the frozen regions; already mentioned; these border on Hudson's Bay, and are chiefly inhabited by a people called Eskimaus, and here we have no settlements, except a few inconsiderable places belonging to the Hudson's Bay company.

THERE is no part of North America more celebrated in history, than Mexico or New Spain, which was for several ages a great and flourishing monarchy, governed by it's own kings, chosen out of their chief captains, without regard to hereditary succession, till the year 1521, when it was intirely conquered by the Spaniards under Ferdinando Cortez*.

THIS country extends from the 7th degree 30 minutes to the 30th degree 40 minutes north la-

* See a particular account of the discovery and conquest of this country in *The World displayed*, Vol. I.

itude. It is bounded on the south-east by the Isthmus of Darien; on the east by the north sea and the gulph of Mexico; on the south and west by the Pacific ocean or South sea; and on the north-west by New Mexico. This prodigious country stretches along the Pacific ocean above two thousand miles, and the coast towards the Atlantic ocean is no less than sixteen hundred in extent, but the breadth is extremely unequal, for to the north-west it is supposed to be between six and seven hundred miles over, while towards the south-east it is confined to the isthmus, which in the narrowest part is not much above sixty miles broad.

THE greatest part of this country lying within the Torrid zone, the air is extremely hot, but is qualified with refreshing showers, and with alternate land and sea breezes; in some parts the vapours rising from a great number of lakes and rivers cool the air, and render it mild and pleasant. The greatest heats are during the months of February, March, and April, when the sun is seldom obscured by clouds. The rainy season begins towards the close of April, and continues till the month of September; and is always preceded by tempests of thunder and lightning, which increase till June, when the rain falls in torrents. On the eastern coast, where the land is low and marshy, the air is extremely unhealthy, and the land incumbered with almost impenetrable woods of mango-trees, that have a bare and disagreeable aspect, and extend a considerable way into the water. The inland country assumes a more agreeable appearance, and the air is more temperate; the tropical fruits grow here in great abundance, the land is beautifully variegated, and the soil extremely fertile. On the western side the land,
B 2 being

being not so low as on the eastern, is much better and abounds with plantations. In general, few places under the same climate enjoy more of the benefits of nature, and of the necessaries and luxuries of life ; but, like all the tropical countries, it abounds more with fruit than with corn.

MEXICO is most valued by the Spaniards for it's mines of gold and silver, which are extremely numerous, but many of them are exhausted. Here are also quarries of jasper, porphyry, and beautiful marble ; and likewise pearls, emeralds, and turquoises. But notwithstanding all it's advantages, it is very thinly inhabited, for the Spaniards have never been able to people it in any tolerable degree.

THE province of New Mexico is supposed to extend between the 28th and 38th degrees of north latitude. On the north it is bounded by high mountains, and a country intirely unknown to the Europeans ; on the east it has the country of Louisiana ; on the west the Californian lake and the river Colerado ; while on the south it is bounded by Old Mexico ; but the far greatest part of this country is still in the hands of the natives, who have the happiness to enjoy their liberty.

As it is seated in the midst of the temperate zone, it enjoys an agreeable climate ; for, though the summers are very warm, and the winters pretty sharp, the former are neither stifling nor unhealthy, nor the latter intensely cold, nor deluged with floods of heavy rain, but the air is clear and salubrious. The country is finely watered with rivulets and rivers, but few of them are large or navigable. The land is beautifully interspersed with rising grounds and fertile plains, covered with trees, some of which are fit for timber, and others produce various kinds of fruits. Here are said to be found gold
and

and silver, turquoises, emeralds, and other precious stones. Here are all kinds of wild and tame cattle, especially cows, with a prodigious variety of fowl, and the rivers are abundantly stored with the most delicious fish. In short, it is affirmed to be one of the pleasantest, richest, and most plentiful countries in the world. However, as in all the other Spanish settlements, only an inconsiderable part of the country is cultivated, compared with it's extent.

THE peninsula of California is the most northern part of the Spanish dominions on the continent of America. It was for a long time considered as an island, but is now found to be a peninsula in the Pacific ocean, issuing from the north coast of America, and extending from cape Sebastian in the 43d degree 30 minutes north latitude to the south east, where it is terminated by St. Lucar, in the latitude 22 degrees 32 minutes, the whole peninsula being eight hundred miles in length. On the north it is bounded by an unknown part of the continent; on the east by the province of New Mexico; from which it is separated by the gulph of California, which some call the Purple, and others the Vermilion sea; and by the Pacific ocean on the south and west.

THOUGH California lies for the most part in the temperate zone, the coast is very hot in summer, but within land the air is more temperate, In winter it is very cold but healthy; however, in so extensive a country there must be great variations both of climate and soil; and it has not only many of the most inhospitable deserts in the universe, but some of the most beautiful lawns, delightful woods, and the most enchanting pastures and meadows. But, though this extensive country is said to be subject to Spain, they have only one

small Spanish town, which is seated near the Cape of St. Lucar ; and no other use is made of it than as a place of refreshment for the Manilla ships, and it's being the head residence of the missionaries, a number of whom have settled in the country, in order to propagate the Romish religion.

LOUISIANA was, till lately, considered by several of the powers of Europe as a much more extensive country, than it is at present, it being represented by M. de Lisle, as extending on the north to Canada ; on the east to the provinces of Georgia, Carolina, Virginia, Pensylvania, and New York ; on the south to the gulph of Mexico ; and on the west to New Mexico, New Spain, and unknown countries inhabited by the Indians. But, by the late treaty of peace, a great part of this country, containing all on the east side of the river Mississippi, was ceded by the French to Great Britain. After which, the French parted with the remainder to the Spaniards.

THE country, at present termed Louisiana, extends from the 29th to the 40th degree of north latitude ; and from about the 88th to the 96th or 97th degree of west longitude from London. Though the soil is very indifferent near the mouth of the Mississippi, the country contains a great deal of excellent land, well stocked with a variety of trees, planted by the hand of nature. The isle of Orleans, at the mouth of the Mississippi, is a very beautiful and fertile spot of ground, on which the French had a considerable city named New Orleans, which is the capital, and indeed the only city of Louisiana ; and here the Spanish governor resides. It is fortified in a regular manner, and, according to some French authors, has five parish churches, and about six hundred handsome houses, with straight, agreeable streets that cross each other
at

at right angles; but the buildings, being chiefly of wood, are not remarkable for their beauty.

THE country to which the Spaniards gave the name of Florida, and which by the late treaty of peace, was ceded to Great Britain, is a peninsula, bounded by Georgia on the north; by the Mississippi and the gulph of Mexico on the west; by that of Florida on the south; and by the channel of Bahama and the Atlantic ocean on the east; extending from Georgia to cape Florida, between the 25th degree 6 minutes and the 30th degree 58 minutes north latitude. It is divided into East and West Florida, the former comprehending the coast washed by the Atlantic ocean, and the latter that near the gulph of Florida and the Mississippi.

THE air, though hot, is pure and wholesome; and the soil, at a little distance from the coast, where it is generally sandy, is remarkably rich and fruitful. It abounds with all kinds of timber, particularly oak, cypress, palm, cedar, pines, and chesnut trees; and saffraas is in particular found in the greatest plenty; excellent oranges, peaches, limes, mulberries, cocoas, plumbs, and many other fruits of a delicious flavour, grow here in great abundance; likewise olives, and vines of various sorts are the natural produce of the country; and the land is thought to be as proper for the cultivation of the grape, as the warm countries of Europe. Among the more precious productions may be reckoned cochineal, of which there are both the wild and the cultivated, but the latter is by far the most valuable. It also abounds with cattle, wild beasts, fowl and fish. Since the conclusion of the peace a great number of persons have removed from England and other places to settle there.

GEORGIA received its name from his late majesty George II. It is separated on the south by the river St. John, which divides it from East Florida; it has the Atlantic ocean on the east, on the north it is separated from Carolina by the river Savanna; and on the west it borders on the low lands of the Creek Indians, and the south end of the Apalachian mountains. The soil, air, and produce of this province much resemble those of South Carolina. But thunder and lightning frequently do great damage to the planters, by destroying their houses, and killing their slaves and cattle. Here are a multitude of wild beasts, birds, and poisonous animals. But rice is said to grow better here than even in Carolina, which with corn and indigo may be esteemed at present its principal commodities. They have made some beginnings towards cultivating the vine, and the raising of raw silk. This last was one of the principal views of the trustees at the first settlement of this province; and indeed both these branches may hereafter become considerable, the climate and soil being found proper for them. The principal towns in Georgia are Savanna and Frederica. The former is the metropolis, and is very pleasantly situated. The number of inhabitants in this province amounts to about eight thousand whites and twenty thousand blacks.

THE provinces of North and South Carolina, which are now two distinct governments, lie between the 31st and the 36th degrees of north latitude, and are upwards of four hundred miles in length, and near three hundred in breadth, from the coast to the Indian nations. They are bounded on the east by the Atlantic ocean, on the south by Georgia, on the west by the Apalachian mountains, and on the north by Virginia. The climate and soil of both

both Carolinas differ but little from those of Virginia, but where they are different, it is to the advantage of Carolina, which may be considered as one of the finest climates in the world. The heat in summer is indeed very great, but it exceeds very little that in Virginia, and has the advantage of a milder and shorter winter. But, though the weather is in general serene, and the air healthy, yet, like all American weather, it makes such quick changes, as obliges the inhabitants to observe more caution in their dress and diet than we are obliged to use in Europe. Thunder and lightning are here very frequent; but the hurricanes here and in the southern colonies, where they are only felt, are very rare, and far from being so violent, as those of the West Indies. Part of March, all April and May, and the most part of June, are here inexpressibly temperate and agreeable; but in the three following months the heat is very intense, and, though the winters are sharp, particularly when the north-west wind prevails, yet the cold is seldom so severe as to freeze any considerable body of water: it is chiefly felt in the mornings and evenings; for the frost can never resist the noon day's sun, whence many tender plants flourish in Carolina, that will not stand the winters of Virginia.

WHERE the country is not cleared by our planters, it may be considered as a great forest. The trees are almost the same as those produced in Virginia, and by their different species, the quality of the soil is easily known. The country near the sea is much the worst, but on advancing farther, it continually improves; and at the distance of one hundred miles from Charles Town, where the land begins to rise into hills, the soil is not only extremely fertile, but the air pure and salubrious, and the summer heats much more tem-

perate than in the flat country; for Carolina is for eighty miles from the sea, an even plain, in which no hill, no rock, and even scarce a pebble is to be found. From this uniformity it must however want the fine effect which it's beautiful products would have by a more variegated and advantageous disposition; but nothing can be imagined more delightful than the back country, and it's fruitfulness is almost incredible. The forests mostly consist of large trees at a considerable distance from each other; so that they can clear in Carolina more land in a week, than we can do in the forests of Europe in a month. The planters here turn their whole attention to the culture of rice, from which they reap great advantage.

VIRGINIA, which was thus called in honour of queen Elizabeth, is a very extensive territory, it being situated between the 36th and 39th degrees of north latitude, and between the 74th and 80th degrees of west longitude; it extending about two hundred and forty miles in length from north to south, and about one hundred and twenty in breadth from east to west. It is bounded on the north by the river Potomac, which separates it from Maryland; on the east by the bay of Chesapeake; on the south by Carolina; and on the west by the Allegany mountains. Heat and cold, both here and in Maryland, are governed by the winds; the north and north-west winds being commonly cold and clear, but the south and east moist, hazy, and very hot. The air is dry and clear in winter, and, though the snow falls in great quantities, it seldom lies above a day or two. The changes of the weather are here sudden and violent; their winter frosts come on without the least warning; and a warm day, in the beginning of winter, is frequently succeeded by so intense a cold, as to freeze
the

the rivers in one night; but here the frosts and rains, though violent, are of a short continuance.

THE face of the country is so extremely low towards the sea, that, on your coming within fifteen fathoms soundings, land can scarcely be distinguished from the masthead. All this coast of America has one remarkable particularity, the distance being known by the soundings, which gradually diminish as you approach the land. The trees at first seem to rise out of the water, affording the stranger a very uncommon and pleasing view. In sailing to Virginia or Maryland, you pass a streight between two points called the Capes of Virginia, which opens a passage into the bay of Chesepeak, one of the largest and safest bays in the world; for it enters the country near three hundred miles from the south to the north, having the eastern side of Maryland and a small part of Virginia on the same peninsula. This bay is almost eighteen miles broad for a considerable way, and seven, where it is narrowest; and through it's whole extent receives a great number of fine navigable rivers, particularly James River, York River, the Rappahannoc, and the Potomac. The last mentioned river is nine miles broad at it's mouth, and navigable for near two hundred miles. Towards the mouth of the rivers, the land has a moist and fat mold, well stored with oaks, poplars, pines, cedars, cypresses, and sweet gums. The country also produces great variety of evergreens. The trees grow to a prodigious height before they shoot into branches; and the woods, not being incumbered with shrubs and underwood, so as to hinder their being travelled through on horseback, afford a commodious shade to those who pass through them. In fine the heads of the rivers afford a mixture of hills, vallies, and plains, adorned with

fruit and timber trees. An author, born in Virginia, thus describes the country: "Here the people
" enjoy all the benefits of a warm sun, and by the
" shady groves are protected from it's inconveni-
" ences. Here all their senses are entertained
" with an endless succession of native pleasures.
" Their eyes are ravished with the beauties of
" nature: their ears serenaded with the perpetual
" murmur of brooks, and the thorough base,
" which the wind plays, when it wantons through
" the trees; the merry birds join their pleasing
" notes to this rural concert, especially the mock-
" birds, who love society so well, that, whenever
" they see mankind, they will perch upon a twig
" very near them, and sing the sweetest wild airs
" in the world; but, what is most remarkable in
" these melodious animals, they will frequently
" fly at small distances before a traveller, warb-
" ling out their notes for several miles, and by
" their music make a man forget the fatigues of
" his journey. The taste of the inhabitants is
" regaled with the most delicious fruits, which
" they have without art, in great variety and per-
" fection; and then their smell is refreshed with
" an eternal fragrancy of flowers and sweets;
" with which nature perfumes and adorns the
" woods almost the whole year round. Have
" you pleasure in a garden? All things thrive in
" it most surprizingly; you cannot walk by a bed
" of flowers, but, besides the entertainment of their
" beauty, your eyes will be saluted with the
" charming colours of the humming-bird, which
" revels among the flowers, and sucks off the
" dew and honey from their tender leaves, on
" which it only feeds". This country produces
all sorts of English grain; but the cultivation of
tobacco employs almost the whole attention of
the inhabitants.

MARYLAND is bounded on the north by Pennsylvania and Delaware bay; on the east by the Atlantic ocean; on the south by Virginia; and on the west by the Apalachian mountains. It is seated between the 38th and 40th degrees of north latitude, and between the 44th and 48th degrees of west longitude, extending about one hundred and forty miles in length from north to south, but not so much in breadth. This province is divided into the eastern and western divisions by Chesepeak bay. Though in summer the air is excessive hot, and in winter very cold, while the north wind blows, yet their heats are seldom troublesome, and that only in a perfect calm, which seldom happens above two or three days in the year; and then only a few hours at a time, when it is rendered very tolerable by their cool shades, their open and airy rooms, arbors and grottoes. The weather, in spring and autumn, is as pleasant as can be wished: even the winters do not last above three or four months, and in these they have seldom one month's bad weather. That part of the country which lies on the bays of the sea and the mouths of the rivers, is hot and moist; but, higher up in the country, the air is more agreeable. However, in the heat of summer they have dreadful thunder; but, as it cools and refreshes the air, the people rather wish for, than fear it.

THE face of the country is divided into low lands next the sea, the hilly country towards the heads of the rivers, and the Allegany or Apalachian mountains, which rise to a great height, and extend from the north-east to the south-west, parallel to the Atlantic ocean. The soil here is as fruitful as in any other country, the principal part being a large plain interspersed with hills of so easy an ascent, and of such a moderate height, that

that they rather seem an artificial, than a natural ornament. Abundance of rivers and brooks diffuse fertility through the country, and every tree, plant, and grain that grows in Virginia, thrives as well here. The number of the inhabitants is computed at about eighty-five thousand whites, and twenty-five thousand negro slaves. The trade chiefly consists in tobacco, and in making tobacco casks and pipe staves for exportation.

PENNSYLVANIA, which is one of the finest countries in the world, is situated between the 39th and 42d degrees of north latitude, and between the 72d and 78th degrees of west longitude, it being bounded on the north-east by the Jerseys, on the north by the lands of the Five Nations, on the west by the Apalachian mountains, and by Maryland on the south; it extending about three hundred and thirty miles in length, and two hundred in breadth. It received it's name, which signifies Penn's country, from Mr. Penn, the celebrated Quaker, whose humanity and wisdom, as a planter and legislator, render him an honour to mankind. The air is here clear, sweet, and serene; the spring lasts from March till June, during which the weather is extremely pleasant. In the summer, which lasts the three following months, the heats are very great, but alleviated by cool breezes, that render them very tolerable. Autumn begins after the 20th of October, and lasts till the beginning of December; after which frosty weather is very common; but, in such seasons, the air is dry, clear, and agreeable.

THIS province is remarkable for it's fertility. It abounds with all sorts of corn, as wheat, barley, oats, rye, pease, beans, Indian corn, and likewise hemp and flax, snakeroot, sarsaparilla, and many other medicinal woods and roots. A variety of
the

the finest fruits grow wild in the woods ; it's forests are well stored with wild game, as it's pastures are with flocks and herds ; and a greater quantity of iron is manufactured in this province than in any other on the continent. It's trade is extensive and valuable, no less than three hundred sail being annually cleared out from Philadelphia to Europe, the West-Indies, &c. Their trade into the interior country with the Indians is likewise very extensive and lucrative. The chief articles exported from this province are wheat, flour, and all other sorts of grain, beef, pork, salted and barrelled fish, horses, furs, and skins, with pig and bar iron, hoghead and pipe staves, hoops, furs, peltry, beef, pork, flax-feed, &c.

THE intire province of New Jersey, containing the two Jerseys, which are divided into east and west, are situated between New York and Pensylvania in a triangular form, and is bounded on the north by Hudson's river, which separates it from the province of New York ; on the east by the Atlantic ocean, which washes it's coast from the mouth of Hudson's river to that of Delaware river ; and on the southward and westward by Pensylvania. It lies between the 39th and 40th degrees north latitude, extending in length on the sea-coast, and along Hudson's river, above one hundred and twenty miles ; and sixty in breadth from east to west.

THE soil is uniform, and produces all sorts of English corn, with the various fruits proper to the climate ; and is said to produce the best cyder of any place on the continent. The timber is tall, and the oaks are esteemed for ship-building. It has valuable mines of copper and iron ; and great quantities of the latter are worked. The lands are chiefly taken up and improved, on which
account

account they have but little wild game. The inhabitants however labour under a considerable disadvantage, which is the uncertainty of their titles, and the continual disputes and law-suits, which, on this account, arise among them. They have, besides, no considerable foreign trade of their own, but exchange their commodities for foreign goods with Pennsylvania and New York, particularly wheat, flour, timber, copper-ore, pig and bar iron, and black cattle, which they drive in great numbers into Pennsylvania, on whose rich pastures they are generally grazed for some time before they are sent to market and killed.

NEW YORK is situated between the 40th and 44th degrees of north latitude, and between the 70th and 76th degrees of west longitude, it being bounded on the east by New England; on the north by Canada; on the north-west and west by the lands of the Five Nations, and part of Pennsylvania; and on the south-west and south by the Jerseys and the Atlantic ocean, extending two hundred miles in length from north to south, and only about twenty-five in breadth, particularly between the colony of Connecticut and Jersey.

THE soil of this province is generally very pleasant and fertile, producing in great abundance all sorts of corn and fruit common to the climate, particularly wheat, one bushel of which is said to have produced here an hundred. Many fine large plains on the banks of its extended rivers are remarkably fruitful, and there are several pleasant and fruitful islands, which form a part of this province, of which Long Island is the most worthy of notice. This is about a hundred and fifty miles in length, and in some places twenty; but generally about twelve miles in breadth. Though the middle of it is somewhat barren, both ends have

have a most excellent soil, improved to as great advantage as any lands in America; producing corn and fruit to great perfection, and abounding in horses, cows, sheep, and swine, more than any other part of the province. In the midst of the island is a celebrated plain sixteen miles long and four broad, called Salisbury Plain, from it's having a fine turf, like that of Salisbury Plain in England; and, as the island produces an excellent breed of horses, they have races here every season, to which the gentlemen of New England and New York resort. The situation of this province is extremely happy for trade, it having a safe and convenient harbour, accessible three different ways for ships of common burden. There are also easy conveyances to and from it by water, from the rivers and lakes, except a few carrying-places, both to Quebec and Montreal on the northward, and to the great lakes Erie and Ontario to the westward, for six hundred miles; and, upon the sea, it has not only the advantage of it's coast, but also of Connecticut and the Jerseys, their trade in a great measure centering here, where they exchange their several commodities for foreign goods. Hence the commodities, exported from New York, are those of the three governments, such as wheat, flour, beef, pork, furs, and castor in great abundance; staves, plank, lumber, flax-feed, pig and bar iron, and some copper; and a large bounty is given by the province to encourage the raising of hemp.

NEW ENGLAND, the most powerful colony in North America, is seated between the 41st and 43d degrees 50 minutes north latitude, and between the 64th degree 40 minutes and the 73d degree west longitude; it being bounded on the north-east and east by Nova Scotia and the bay of Fundy;

Fundy; on the north-west by Canada; on the south-west by the province of New York; on the south by the sound; and on the south-east by the Atlantic ocean, extending from Kenebec river to the south-east boundary of New York three hundred and thirty miles; and, from Cape Cod to the north-east bounds of New York, it is one hundred and ninety miles broad.

THIS extensive country is divided into four distinct districts or governments, the colony of Connecticut, that of Rhode Island, the province of New Hampshire, and the province of Main, now called the county of York, which is under the jurisdiction of the province of Massachusetts bay.

WITH respect to the climate of New England in general, they enjoy a warmer summer than we, and this season is usually accompanied, for two months together, with a clear sky, which renders the country extremely healthful, so that no part of our plantations is more agreeable to the constitutions of the English; yet the winters of New England are much severer than ours, and, though it lies considerably farther to the south, the frosts are not only much sharper than with us, but continue longer.

THE land next the sea is generally low, and in some parts marshy; but farther up it rises into hills, and on the north-east is mountainous and rocky. The country abounds with mines of excellent iron, and some of copper; in the woods and swamps, is plenty of good timber, from which are produced pitch, tar, rosin, and turpentine; and more ships are built in New England, than in all the other parts of America. Notwithstanding the severity of the winter, it abounds with fruit-trees, so that a planter may easily make a hundred hogheads of cyder in a season. There are here raised

raised as good hemp and flax as any in the Baltic; and their roots, as turnips, parsnips, carrots, and radishes, though their seeds came originally from hence, are much larger and richer than ours. The peaches grow upon standards, and have a finer flavour than those of England; but nothing is so much planted here as maize, or Indian corn, of which we shall give a particular account in treating of the vegetables of North America. There are here also a great variety of other plants different from those of Europe; and, though the soil is extremely various, the inhabitants, by means of their trade, and the produce of different parts of the country, enjoy all the necessaries of life in the greatest profusion, with most of its luxuries.

NOVA SCOTIA, the most eastern part of the continent of America, is situated between the 44th and 49th degrees north latitude, and between the 60th degree 15 minutes and the 69th degree west longitude, it being bounded on the east by the gulph of St. Lawrence and the straits of Canso, which separate it from Cape Breton; on the south by the Atlantic ocean; on the west by the bay of Fundy and the province of Main belonging to Massachusetts bay; and on the northward by the river of St. Lawrence, which divides it from Canada.

NOVA SCOTIA is, in general, a fine country, though the winters are very severe, and the snow lies deep on the ground; but, during that season, the air is generally clear, with a bright sunshine and azure sky; but the summer is hotter than in England.

THE soil of this province is also various. In some places it is barren, and in others extremely fertile and pleasant, particularly round the bay of Fundy, and on the rivers which fall into it. The eminences,

eminences are also very pleasant and fruitful, producing wheat, rye, Indian corn, pease, beans, hemp, and flax, and several kinds of fruit in great perfection; among which gooseberries, strawberries and raspberries, grow wild in the woods, and several parts yield fine timber fit for building ships. It abounds with all the necessaries of life, particularly with a great number of game, wild fowl, and fish.

CANADA, or the province of Quebec, which Great Britain conquered from France in the late war, and was secured in the possession of by the treaty of peace which followed, is the largest of any of our provinces on the continent. Quebec, the capital, is seated near the centre in the 46th degree 45 minutes north latitude, and in the 69th degree 48 minutes west longitude. It is bounded on the north-east by the gulph of St. Lawrence and St. John's river; on the south-west by lands inhabited by the Indians, which are frequently included in this province; on the southward by the provinces of Nova Scotia, New England, and New York; and on the north-westward by lands claimed by the Indians; extending about five hundred miles in length from the north-east to the south-west, and upwards of two hundred miles in breadth. The French, under the name of Canada, comprehended a much larger territory, taking into their claim great part of the New England provinces, and of those of Nova Scotia and New York, and extending it northward to Hudson's bay; to the west as far as the Pacific ocean; and to the southward to the gulph of Mexico.

THE climate is cold and the winter long and tedious, especially in the north-east parts of the province; yet the soil is, in general, very good, and in many parts both pleasant and fertile, producing
most

most kinds of English grain and vegetables in great abundance. The summers of Canada are exceeding pleasant, and we are told have so happy an effect upon the soil, that the farmer usually reaps his corn in sixteen weeks from the time of sowing the seed. The meadow grounds, which are well watered, yield excellent grass, and breed vast quantities of large and small cattle. It affords very fine timber, and the mountains abound with coals. It is remarkable for its rivers and its lakes of a prodigious size.

CAVES, LAKES, CATARACTS, &c.

A TRAVELLER gives us an account in the Philosophical Transactions of a remarkable cave some leagues to the north-west of Mexico, gilded all over with a sort of leaf-gold, which had deluded many Spaniards by its promising colour, for they could never reduce it into a body, either by quicksilver or fusion. Our author went thither one morning with an Indian for his guide, and found its situation was pretty high, and in a place very proper for the generation of metals. As he entered into it, the light of the candle soon discovered on all sides, but especially over his head, a glittering canopy of these mineral leaves; at which he greedily snatching, there fell down a great lump of sand, that not only put out his candle, but almost blinded him: and, calling aloud to his Indian, who stood at the entrance of the cave, as being afraid of spirits and hobgoblins, it occasioned such thundering and redoubled echoes, that the poor fellow, imagining he had been wrestling with some infernal ghosts, soon quitted his station, and thereby left a free passage for some rays of light to enter, and serve him for a better guide.

guide. Our author's sight was somewhat affected by the corrosive acrimony of the mineral dust; but, having relighted his candle, he proceeded in the cave, heaped together a quantity of the mineral mixed with sand, and scraped off from the surface of the earth some of the glittering leaves, none of which exceeded the breadth of a man's nail, but with the least touch were divided into many lesser spangles, and with a little rubbing they left his hand gilded all over.—The chymical experiments this traveller made with the sand, it is not to our purpose to relate.

ON the western coast of Mexico there is a vast hollow rock, which, having a large hole at the top, makes a frightful noise at every surge of the sea, and sometimes spouts up water, like a whale, to a prodigious height.

IT is reported of the lake of Mexico, that it has two sorts of water, one part of it being fresh and abounding with fish, insomuch that the fishery brings in to the government above twenty thousand crowns per annum; and the other part salt, and ebbing and flowing like the sea. The fresh water is said to be usually calm, but the salt generally boisterous, and to breed no fish. It is added, that in the middle of this lake there is a rock, from whence issues a considerable stream of hot water.

THE large lakes of Canada deserve to be mentioned, the principal of which are five in number, and are sometimes called seas, on account of their extent. That called the Upper Lake, or Lake Superior, is said to be two thousand miles in circumference, and very deep, except near the west end where are several islands, especially one near three-score miles in compass, wherein is said to be a mine of pure copper, the ore affording three-fifths of fine metal, without any preparation besides melting.

melting. The banks of this lake, to the north, south, and east, are in some places very high and steep, they being more than two hundred feet above the surface of the water.—The other lakes, though very large, are not equal to this in dimensions.

IN the river St. Lawrence, where it forms a communication between two of these lakes, there is one of the most surprising cataracts or falls of water yet discovered in the world. Father Hennepin, a French missionary among the Canada Indians bordering on it's banks, has described this prodigious cascade as falling down a precipice a hundred fathoms high, which is six hundred feet; but Mr. Dudley has published an account of this cataract, taken at Albany in 1721, from Mr. Boraffaw, a native of Canada, which perhaps comes nearer the truth. That gentleman says that, the governor of Canada having ordered his own son with three other officers to survey the Niagara, and take the exact height of the cataract, they accordingly did so with a stone of half a hundred weight tied to a large cod-line, and found it upon a perpendicular no more than twenty-six fathoms. Upon Mr. Dudley's objecting Hennepin's account of this cataract to Mr. Boraffaw, he replied, that indeed every body had depended upon it as right till the late survey; and he acknowledged that below the cataract for a considerable way there were a great many small ledges of rocks across the river, which gradually lessened till they came to a level; so that, if all the descents were put together, he did not know but the difference of the water above the falls, and the level below, might come up to Father Hennepin's account: but the cataract, properly so called, is no more than twenty-six

six fathoms, or a hundred and fifty-six feet ; which is a prodigious thing, and what the world cannot parallel, considering the largeness of the river, which, streightened as it is in that part, is near a quarter of an English mile broad, and very deep water. Both above and below these falls the river is much wider, and from below there is no coming nearer them by water than about six English miles, the torrent is so rapid and the whirlpools so terrible.

It has been alledged that this cataract makes such a prodigious noise, that people cannot hear each other speak at the distance of some miles from it; but M. Borassaw affirms, that they may converse together close by it : and it has been also positively asserted, that the shoot of the river, when it comes to the precipice, was with such a mighty force, that a man and horse might go under it without being wet ; but this M. Borassaw likewise denies, and says that the water falls in a manner directly down. He farther observes, that the mist or shower which the falls occasion is so extraordinary as to be seen at five leagues distance, and rises as high as the common clouds. In this mist, when the sun shines, there is always a glorious rainbow.

WHAT are called the great lohoes falls of the Mohawk river, have also a surprising appearance. The river is near a quarter of a mile broad, and the water, precipitating itself from several rocks which project from the rest, falls down on every side them in torrents, and, being broken near the bottom by many separate crags, rises in a white froth. The descent is here said to be about seventy feet, in which height are probably included the steep descents just below the above disjointed precipice ; from whence also rises a misty cloud, that descends like small rain, and exhibits, when
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the sun shines, a beautiful rainbow *, that moves as the spectator moves, according to the angle of vision.

As to rivers, the northern part of America abounds with large ones, of which it is not our business to enter into a detail, but shall give a brief account of the two most considerable, which are those of Canada or St. Lawrence, and Mississippi. The river of St. Lawrence (a name given it by the French) is the largest in North America, and inferior to few in the world, it being computed to be about thirty leagues broad at the mouth, and two hundred fathoms deep: it takes its rise from a ridge of mountains to the north of lake Nippisong, which is situated to the north-west of lake Superior, and falls into the gulph of St. Lawrence at the isle of Anticosti, having received many other rivers in its course, which is generally reckoned to be about eight hundred leagues: but the length of its course cannot be exactly determined; and, as to its navigation, authors give us such different accounts as are not easy to reconcile, some representing it as safe, easy, and pleasant; and others as so extremely difficult and dangerous, that the most experienced pilots have much ado to escape the many dangers they are exposed to, from the sandy banks, rocks, and shoals along the north shore; but however the river in general is very deep, nor is its navigation interrupted by cataracts, till a

* Mr. Smith took notice of the like phænomenon at the cataract of Narva in Livonia. We also read of marine rainbows sometimes observed in a much agitated sea, when the wind sweeps away the tops of the waves, and carries them aloft, so that the sun's rays falling on them are refracted, &c. as in a common shower, and paint the colours of the bow, but less distinct and of less duration.

great way above Quebec, which is more than three hundred miles from the sea. There are many pleasant islands in it, some of which are inhabited, well cultivated, and fertile.

THE Mississippi, or Messasippi, is another very large river, which runs from north to south, upwards of three thousand miles. Its source is a lake of considerable bigness, named the Red lake; and, after it has received many rivers in its course, among which is the Ohio, it falls into the gulph of Mexico.

F O S S I L S.

THE Spanish dominions in North America abound with mines of gold and silver, especially the latter, of which precious metal it is said there are no less than a thousand mines in the Mexican empire; but many of these are not wrought, for want of native Spaniards and Negroes. Mr. Coxe affirms, that Carolana, or Louisiana, has copper in abundance, and so fine that it is frequently found on the surface in pieces very pure without melting; and those who have tried the ore say, that by the common methods it yields above forty per cent. The lead-ore in that country affords sixty per cent. and has been already discovered in quantities more than sufficient for common use. Iron ore is also found plentifully in many places near the surface of the earth, from which a metal is extracted little inferior to steel in goodness. Some mines of quicksilver have likewise been discovered, and our author thinks many more might be found if proper search were made after them. The mineral from whence the quicksilver is obtained is of a scarlet or purple colour, which the natives make no other use of than to paint their faces and
bodies

bodies therewith in time of war, or on occasions of festivals and rejoicings. This ore is broken and distilled in earthen pots, the necks whereof are put into others almost full of water, which last are placed in the ground ; and, being thus set in rows almost contiguous, a fire is made over them with small brush-wood, which drives the quick-silver out of the ore into the water. Three or four men will tend some thousands of these pots. The great trouble is in digging ; but all the expence does not amount to a tenth part of the value of the produce.

To make it appear probable that both gold and silver might be found in Louisiana, Mr. Coxe gives us some accounts he received from persons of credit, and particularly by letters from New Jersey, written by one well skilled in the refining of metals, signifying, that for several years successively a fellow took a fancy to ramble with the Indians to the other side of the mountains on the back of New York to the country we are speaking of, and always brought home with him a bag, as heavy as he could well carry, of dust, or rather small particles of divers sorts of metals, very ponderous. When melted, it appeared to be a mixture of metals, to which at first they could assign no denomination ; but by repeated trials they found it contained lead, copper, and when refined, above a third part of silver and gold. Great pains were taken to bring this fellow to discover where he got this treasure, which served him only to drink and sot till he went on another expedition ; but nothing could prevail upon him to declare any more than this, that, about three hundred leagues south-west of Jersey, at a certain season of the year, there fell great torrents of water from the mountains, and,

when they ceased, the Indians washed the sand or earth at some distance below those falls, and at the bottom remained that medley of metals.—Our author farther observes, that there are great quantities of orpiment and sandarach in divers parts of this province; and writers on metals and minerals affirm, that, they not only contain gold, but where they are found, they are generally the covering of mines of gold or silver.

As to the gems of Louisiana, all that Mr. Coxe knows of are amethysts, of which there are some very fine and large; and turquoises, thought to be as fine and large as any in the world. There is also an account of lapis lazuli, which, according to those skilled in mines, is another indication that gold is at no great distance.—But we need say no more of gems or metals in this place, having spoken of them sufficiently, as they occurred in the course of this work.

UNDER this head we may take notice of the filtre-stone of Mexico, though perhaps it should rather be referred to the vegetable kingdom. It is said to grow under water on the rocks in some parts of the gulph of Mexico, and to harden and petrify spontaneously in the air; but Dr. Vater, who has given some account of it in the Philosophical Transactions, does not take upon him to determine either it's origin or the manner of it's growth, both appearing to be very suspicious. It has obtained the name of filtre from it's porosity, whereby it lets liquors pass through it; and for this reason pots and mortars are made from large pieces of it, to strain liquors, particularly water to drink; for it is thought that water filtrated through this stone is thereby freed from all it's impurities, and becomes more wholesome. This is the reason, says the doctor, that these stones are highly

highly valued in Japan, and sold at the price of gold ; because the Japanese, who know nothing of the stone or other disorders in the kidneys, and who prefer health far before all other blessings, think the filtration of their drink contributes to the prolonging of life. But, according to Le Clerc and other writers, these tophaceous stones are not confined to Mexico, but, dug up in several parts of Europe ; and our author had a choice collection of fossils presented to him by Dr. Ehrhart of Memmingen, in which there was a tophus peculiarly porous, found about that city, which would strongly imbibe water, as soon as applied to its surface. However, whether the Mexican filtre be taken out of the sea, or dug out of the earth, Dr. Vater does not pretend to determine, as has been already intimated.

WITH respect to the virtue ascribed to the Mexican filtre-stone, our author, from several observations and experiments, makes it evident, that no stone-filtres are able to depurate water, and separate the saline earthy and mineral impurities therein dissolved : yet he does not deny, but that muddy and slimy waters may by straining through such stones become more clear and pellucid ; because these impurities do not dissolve in the water, or intimately incorporate with it, but only float therein. These excepted, no other waters can be made purer, as the doctor learnt from repeated experiments, made both by the filtre of Holland, the tophus of hot baths, and common stone, on several kinds of river and spring water ; for, having examined their weight before and after filtration, he found little or no difference. How happy therefore, observes the doctor, are the countries to which Providence has given limpid and wholesome springs of water, which require no such filtres ! But, as

for those that are deprived of this blessing, the best they can do is to use rain-water, which by distillation is freed from all it's impurities.

WE have already in several places taken notice of the extraneous fossils that are found in different parts of the world, and particularly of the bed of oyster-shells near Reading in Berkshire; but this seems trifling, compared to the accounts we have of the vast quantities of these shells found in Virginia, where for many miles together the earth is intermixed with them to the depth of several yards. In some places the shells lie closely bedded together, and look like the veins of a rock, of which some are three or four yards thick, and as hard as free-stone. Of these rocks of oyster-shells, which are not so much petrified, they burn and make all their lime; and in the looser banks of shells and earth there are often found perfect teeth petrified, some of which are two or three inches long, and above an inch broad, the part that one may suppose to have grown out of the jaw being polished, and almost as black as jet. The back-bones and ribs of whales (according to Mr. Clayton) have also been dug up many miles distant from the sea.— But this subject having been sufficiently handled in the preceding parts of this work, we shall not enlarge upon it here. We may add, however, one particular relating to Virginia which is very remarkable, viz. that, from the sea-coast for a hundred miles up into the country, there is scarce a stone to be seen, except here and there some rocks of iron-ore; so that they ride their horses without shoeing them, and, the country and climate being dry, their hoofs are harder than those of our horses in England. Instead of stones they find a clay, of which they make very fine bricks; and it is to be observed, that, at the water-falls from
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the mountains, there are stones enough of different kinds, fit for paving and other uses. The hills likewise afford quarries of slate and of a kind of free stone; and they have also a sort of shining pebbles, not unlike kerry-stones, which, though generally soft, are said to harden by the air, and, when polished, are extremely beautiful. As to mines, they have several of good iron in divers parts of the country: but we need not dwell longer on a subject which affords us nothing very remarkable, and therefore shall proceed to that of

V E G E T A B L E S.

THE ancients seem to have been acquainted with only one species of the aloe, but the late travels into Asia, Africa, and America, have occasioned the discovery of at least forty sorts unknown to antiquity; nay, Mr. Bradley assures, us he has seen above sixty several kinds in the physic-garden at Amsterdam. Be this as it will, our present business is chiefly with what we call the American aloe, which is one of the most curious and remarkable plants of all the numerous species. Almost every one knows, that the aloe-plant has very thick green leaves, broad towards the root and tapering to a point, stiff and prickly, and yielding a kind of cotton, whereof laces may be made. From the midst of the leaves arises a stem, which bears the flowers and fruit. The flowers grow at the ends of branches that shoot out opposite to each other; and each consists but of one leaf, cut into six segments at the top like the hyacinth. The fruit is oblong and cylindrical, divided into three cells, in which are contained flat, and for the most part, semicircular seeds. Most of the African sorts produce flowers with us annually, when

grown to a sufficient size ; but the American aloe, which most commonly produces it's flower-stem immediately from the center of the plant, seldom flowers till it be of a great age, and this but once during the life of the plant ; so that to have one flower in England is reckoned a curiosity, and generally draws a vast number of spectators. It is observed, that, when the flower-stem, which is usually large and grows to a great height, begins to shoot from the middle of the plant, it draws all the nourishment from the leaves ; so that, as the stem advances, the leaves decay ; and when the flowers are full blown, scarce any of the leaves remain alive : but, whenever this happens, the old root sends forth numerous off-sets ; and it is only at this time that some of these aloes can be propagated.

DR. MERRET tells us, that he had an American aloe, consisting of eleven leaves, which was tied about with a red dry cloth, and hung up, without oil, in his kitchen. In a whole year he observed it lost two ounces, three drams, and twenty-four grains of it's weight. The next year being drier and hotter, it lost upwards of three ounces ; and more than double in the six colder than in the six hotter months. He kept it about five years, and it wasted much in the same proportion, till at last, hanging it in a cold garret, it died. The doctor took notice, that every year two of the greater leaves first changed colour and withered, and every spring there succeeded two fresh and green ones, of the size of the preceding ; from whence he thinks it may be probably inferred, that there is a circulation of the nutritious juice in this plant ; for how is it possible that the roots, continuing firm and solid as at first, should supply so much nourishment, unless the said juice returned from the old decayed leaves into the root, and so produced new ones ?

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Aloe Plant



Pl. 1. 1. 1.

Pl. 1. 1. 1.

Pl. 1. 1. 1.



It is proper to observe, that, of all the species of aloes, there are not above twelve that yield the inspissated juice of the same name, much used as a purgative remedy. This juice is obtained by cutting the leaves of the plant, from whence it oozes either spontaneously or by pressing, and is exposed to the sun till it becomes of a proper consistence. There are three sorts of aloes, the succotrine, which is the purest; the hepatic, which is somewhat coarser and harder; and the caballine or horse-aloes, which is the most impure, blackest, and strongest of all, and is of little use amongst us but for horses and cattle. Whether these are all procured from the same plant, or from different species of it, authors are not rightly agreed.—The best aloes is that which is pinguious, of a dark colour, in some measure friable, it's smell resembling that of myrrh, and which when pounded yields a powder of a golden colour. In consequence of it's bitterness it is called the gall of nature; and this makes it so nauseous, that it is rarely used in liquid forms, but made up into pills. It consists of two substances, one resinous, which may be extracted by spirit of wine; the other of a gummy nature, which may be dissolved in water. It's balsamic quality is so great, that animalcules may be preserved in it for ages; and upon this account it is used in embalming human bodies. It's cathartic virtue is best employed in watery, cold, mucous constitutions, and such as are disposed to the generation of acids. Against worms it is used both internally, and externally, and it is reckoned efficacious in promoting the menses. The succotrine aloes is preferable for internal uses, and the hepatic for external.

AMONGST the vegetables of America, one of the first we ought to mention is the celebrated

plant we call tobacco *, which is now grown into such general use in Europe, and makes one of the most profitable branches of the English commerce. The Virginia tobacco, especially the sweet-scented, which grows on York River, is reckoned the best in the world, and is generally vended in England for home consumption; but the hotter sorts, either of Virginia or Maryland, turn to as good account, being demanded in Holland, Denmark, Sweden, and Germany. Mr. Clayton says, that the sweet-scented tobacco, which grows on sandy land, is best for smoaking whilst new, or only two or three years old; but, if the stiff land tobacco, which is generally of a good substance, be kept five or six years, it will much exceed the former.

THE manner of planting and ordering tobacco is this: The seed is first sown in beds of fine mould, and, when the plants are risen to a convenient height, they are transplanted to little hills three or four feet from each other, somewhat in the manner of hop-grounds. This is done about the beginning of May, from which time the hills are kept continually weeded, and, when the plants have put forth such a number of leaves as they think the soil will nourish to a sufficient substance and largeness, they take off the top of each plant,

* This plant has different names among the Indians in different parts of America, as petun, picelt, yoli, &c. The French, at it's first introduction amongst them, gave it various names, as nicotiana, from John Nicot, then embassador of Francis II. in Portugal, who brought some of it with him from Lisbon, and presented it to a grand prior of the house of Lorrain, and to queen Catharine de Medicis, whence it was also called queen's herb, and grand prior's herb. They also gave it other names, which are now all reduced to the original name tobacco, given it by Hernandez de Toledo, who first sent it into Spain and Portugal, about the year 1560.

which after that grows no higher. If the ground be rich, they let a plant put forth twelve or fifteen leaves before they top it; if poor, not above nine or ten; and so in proportion to the goodness of the soil. The suckers which the plant puts forth between the leaves are taken off once a week till it comes to perfection, which it does in August. Then in dry weather, when there is a gentle breeze of wind, they cut down what is ripe, letting it lie three or four hours on the ground; after which they carry it on their shoulders to the tobacco-houses, or sheds, where a peg is driven into the stalk of each plant; and by these pegs the plants are hung up to dry, so near each other that they just touch. Thus they let them hang for five or six weeks, till such time as the stem in the middle of the leaf will break in bending it; and, when the air has so moistened the leaves that they may be handled without breaking, they strip them off the stalks, tie them in little bundles, and pack them up in hogheads for exportation. The bundles designed for twist-tobacco are steeped in sea-water, or, for want of that, in common water, then twisted in the manner of ropes, and the twists formed into rolls by winding them with a kind of mill round a stick; and in this condition they are imported into Europe.

MR. CLAYTON informs us, that sometimes they are forced to plant their hills twice or thrice over, on account of an earth-worm which eats the root; and, when the plants are well grown, they often suffer damage by a worm called a horn-worm, which is bred upon the leaves, and, if not carefully taken off, will spoil a whole crop. The plants, when young, are also sometimes destroyed by a small fly, which breeds upon them in gleamy weather; and they are likewise subject to a d. f.

temper they call firing, which happens when very hot weather suddenly follows a wet and cold season, at which time the leaves of the young plants turn brown and are dried to powder. Another fault is when the leaves do not spread and grow large, but rather spire upwards and grow tall; and such plants as these they call Frenchmen.

TOBACCO is very much used amongst us, either by smoaking it in a pipe, by way of snuff, or by chewing it in the mouth; and it is sometimes put up the nose in little pellets, where it is found to produce good effects, to draw a deal of water or pituita, to unload the head, resolve catarrhs, and cause a free respiration; but this way of taking tobacco is said to weaken the sight. When taken in great quantities in the way of snuff, it is found to prejudice the smelling, and greatly diminishes the appetite. That taken in the way of smoke dries and damages the brain; insomuch that we read of a person who through excess of smoaking had dried his brain to that degree, that after his death there was nothing found in his skull but a little black lump consisting of mere membranes. Indeed smoaking and chewing of tobacco have been esteemed of service where the glands of the fauces have abounded with lymph, or where the constitution in general has been too much loaded with serum; and the same has been said to relieve some asthmatic patients, which is not unlikely: but this can be no reason for it's habitual use, especially in those who have no occasion for it; for to such, as an eminent physician apprehends, it does a great deal of prejudice, by drawing off the saliva, which nature providently prepares to dilute and in some measure to dissolve the aliments taken in the stomach. Besides, it excites a perpetual thirst, and thereby tempts the person who
smoaks

smoaks or chews to drink more than is sufficient for any good purposes in the constitution. Add to this, that many people have been brought into dropfies and consumptions by too profuse discharges of the saliva, excited by smoaking or chewing tobacco. Upon the whole, it must needs be extremely prejudicial, unless when it can be made subservient to any good medicinal purposes; and even then, like opium, it should be used when required only, and left off immediately when the necessity for it ceases. The same may be said of tobacco considered as a sternutatory, which may answer some purposes as a medicine, but it is sure to be prejudicial when rendered habitual by way of amusement*.—This plant is narcotic, emetic, and cathartic to such a degree, that the internal use of it is seldom or never to be allowed, though a water distilled from the green leaves is much recommended for dissolving stones in the urinary passages. Some people use an infusion of tobacco as an emetic; but it is a dangerous and unjustifiable practice, as it is too apt to produce violent vomitings, sickness, and stupidity. A strong decoction of the stalks, with sharp pointed dock and alum, is reckoned of good service, used externally, in cutaneous distempers, especially the itch, for which purpose some boil them in urine; and the same is said to be an infallible remedy for the mange in dogs. The juice of tobacco is recommended to preserve the teeth and gums, and

* Some princes, as Amurath IV. emperor of the Turks, an emperor of Persia, and a great duke of Muscovy, have prohibited the use of tobacco in their dominions; and our king James I. was so sensible of its pernicious effects, as to write a treatise expressly against it, intitled a Counter-blast to Tobacco.

to cure the tooth-ach; for which last purpose the chymical oil of tobacco, dropped on lint and applied to the tooth, has been of service; but people should be very cautious how they use this oil, which is so strong, that a drop or two of it put on the tongue of a cat produces violent convulsions, and death itself in the space of a minute. Some writers extol the use of tobacco in times of pestilence, asserting that, when the plague raged in London, the houses of tobacconists escaped the infection. But the greatest use of tobacco in medicine is in clysters; for even the smoke of it conveyed into the intestines stimulates so strongly, as to procure stools when every other method of doing it has failed.

AMONG the shrubs of California is one called pitahaya, which is said to be peculiar to that peninsula; its branches are finely fluted, and rise vertically from the stem, so as to form a very beautiful top; yet it bears no leaves, the fruit growing on the boughs, without shade or cover. It resembles a horse chestnut, but contains a pulp, which has some resemblance to that of a fig: in some it is white, in others yellow, and sometimes red; but always exquisitely delicious, it being a rich sweet, tempered with a grateful acid. This peninsula has likewise most of the fruits to be found in other parts of America.

ANOTHER very remarkable vegetable of North America is the poison-wood-tree, which grows in New England in swamps or low wet grounds, and is described by Mr. Dudley as somewhat like a small ash, but much more like a sumach, which it exactly resembles in its twigs, leaves, and shape, so that some call it the swamp sumach; and it likewise bears a dry berry. It never grows bigger than about the thickness of a man's leg, and as tall

tall as an alder; but it spreads much, and several grow together, especially about the roots of one that has been cut down. The inside of the wood is yellow, and very full of juice, which is as glutinous as honey or turpentine, and stinks as bad as carrion; and the wood itself has a very strong disagreeable smell.—As to its poisonous quality, our author observes, that it poisons two ways, either by the touch or by the smell; the scent of it, when cut down in the woods, or burning in the fire, being poisonous to a great degree. One of Mr. Dudley's neighbours was blind for above a week with only handling it; and a gentleman, sitting by his fire-side in the winter, was swelled for several days with the smoke of some of this wood that happened to be in the fire. But, what is strange, it has this effect only on some particular persons and constitutions, for Mr. Dudley has seen his own brother not only handle it, but chew it without any harm at all; and so by the same fire one shall be poisoned, and another not in the least affected. However, this sort of poison is never mortal, but will go off in a few days of itself; though generally the patient applies plantain-water, or sallet-oil and cream. A few hours after a person is poisoned, he feels an itching pain that provokes a scratching, which is followed by an inflammation and swelling.—The wood is as cold as ice, as Mr. Dudley's neighbour that was poisoned told him, so that he plainly perceived it differed from the other wood he was throwing up into his cart; and he assured him he could distinguish it blindfold, or in the dark, from any other wood in the world by its coldness.

As we are now speaking of New England, it seems proper to add some other observations of Mr. Dudley on the vegetables of that country,
and

and particularly on the Indian corn or maize, which is the most prolific grain they have, commonly producing twelve hundred grains from one, and often two thousand *. But the fairest computation (says our author) is this: Six quarts of this grain will plant an acre of ground, and it is not unusual for an acre of good ground to produce fifty bushels of corn.—Another thing very remarkable in the Indian corn is it's variety of colours, as blue, white, black, red, yellow, greenish, speck-

* The fecundity of divers plants is very surprising. We have an account in the Philosophical Transactions of a single plant of barley, that by steeping and watering it with salt-petre dissolved in water, produced two hundred and forty-nine stalks and eighteen thousand grains. In this case indeed there were art and force made use of, but we have remarkable instances of this kind, effected by unassisted nature, particularly that of a pompion-seed, attested by Mr. Edwards of Windsor. This seed, in the year 1699, was accidentally dropped in a small pasture, where cattle had been foddered for some time; and, taking root of itself, without any manner of care the vine ran along over several fences, and spread over a large piece of ground far and wide, continuing it's progress till it was killed by the frost. The seed produced no more than one stalk, but it was a very large one, being eight inches round; and from this single vine they gathered two hundred and fifty pompions, one with another as big as a half peck, besides a considerable number of small ones, not ripe, which they left upon the vine. Add to this what M. Dodart observes, who has an express discourse on the fecundity of plants in the memoirs of the Academy of Sciences, wherein he shews, that an elm, at a moderate computation, yields one year with another three hundred and twenty-nine thousand grains or seeds; each of which, if properly lodged, would grow up to a tree. Now an elm ordinarily lives a hundred years, and consequently, in the course of it's life, produces near thirty-three millions of grains, all coming originally from one single seed.—But instances of this fecundity need not be multiplied here, being obvious to every one's observation, who has the least regard to the wonders of nature.

led,

led, striped, &c. and, if any one sort be planted separately, so that no other sort be near it, it will retain it's own colour; but if in the same field you plant the blue corn in one row of hills (as they are called) and the white or yellow in the next row, they will mix and interchange colours; that is, some of the ears in the blue corn rows shall be white or yellow, and some in the white or yellow rows shall be blue. The little hills of Indian corn are generally four or five feet asunder, and continued regularly in straight lines, something in the manner of a hop-ground; and yet this mixing and interchanging of colours has been observed when the rows of hills have been several yards distant from each other: nay Mr. Dudley was assured that this interchange has been made even at the distance of four or five rods, and particularly in a place where there was a broad ditch of water between the two different sorts of grain; so that the mixture cannot be owing to the roots and small fibres reaching to and communicating with each other, as some have imagined. Our author, therefore, is of opinion, that the stamina or principles of this surprising copulation or commixture of colours are conveyed by the wind, and that the season of it is when the corn is earing, and while the milk is in the grain; for at that time it is in a sort of estuation, and emits a strong scent. What confirms this hypothesis, of the air being the medium of this communication of colours in the corn, is an observation of one of Mr. Dudley's neighbours, viz. that a close high fence of boards between two fields of corn, that were of a different colour, entirely prevented any mixture or alteration.

MR. WINTHROP describes the ear of the Indian corn as generally about a span long, consisting of several rows of grain, commonly eight or more, according

according to the goodness of the soil, and each row containing above thirty grains. The white and yellow sorts are the most common; but he observes, that, not only in the same field, but even in the same ear, the grains are sometimes of different colours. The ear is cloathed and armed with several strong thick husks, which not only defend it from unseasonable rains, and from the night-colds, (it being the latter end of September before it is fully ripe in some parts) but also from crows, starlings, and other birds. It's stalk grows to the height of six or eight feet, more or less, according to the condition of the soil, or the kind of the seed. The maize of Virginia grows taller than that of New England, and there is a sort used by the northern Indians farther up the country, which is much shorter. It is always jointed like a cane, is full of a sweet juice, and at every joint grow long leaves almost like flags, and at top a bunch of flowers like the blossom of rye. The manner of planting this Indian wheat is in rows at equal distances every way, as has been already mentioned; and, when the corn is grown up to a proper height, they cut up the weeds and loosen the earth about it with a broad hoe, repeating this labour as often as the growth of the weeds makes it necessary. When the stalk begins to grow high, they draw a little earth about it; and, upon the putting forth of the ear, they scrape up as much as will make a little hill like a hop-hill; after which they give themselves no farther trouble about it till harvest.—This culture is all done with the hoe, but the English have now taken a better way of planting. With the plough they make single furrows through the whole field at the distance of six feet, or as they see convenient; and to these they make cross furrows at the same distance.

tance. Where these furrows intersect each other, they throw in the corn, and cover it either with the hoe, or by running another furrow with the plough. When the weeds begin to over-top the corn, they plough the rest of the field between the planted furrows, and so turn in the weeds. This is repeated when they begin to hill the corn with the hoe, and thus the ground is loosened, and the roots have liberty to spread.—The husks that grow about the ear of this corn the Indian women slit into narrow slips, and weave them curiously into baskets of several fashions.

SPEAKING of some of the vegetables in New England, Mr. Dudley mentions a platanus or button-wood-tree, as it is there called, which was nine yards round, and held that bigness a great way up; and this tree, when cut down, made twenty-two cords of wood, as our author was informed. This tree he often propagated by cutting of sticks five or six feet long, and setting them a foot deep in the ground in the spring of the year, when the season is wet; and this and the locust-tree (or American manna, as Mr. Dudley thinks it may be called) are remarkable for their quick and easy growth. A seed of the latter, blown off into our author's garden, took root of itself, and in less than two years was got above six feet high.

WITH regard to their fruit-trees Mr. Dudley observes, that their peach-trees are all standards, and he himself has had in his own garden seven or eight hundred fine peaches of the rare-ripes growing at the same time upon one tree; to which we may add, that in several of the plantations they have such vast quantities of peaches, that they beat them off the trees and give them to their hogs. These trees raised from the stone will bear in three years, and our author had one in his garden of
twelve

twelve years growth, that measured two feet one inch round, a yard from the ground, and two years before bore near two bushels of fine peaches.

THE people of New England, says Mr. Dudley, have of late years run so much upon orchards, that in a village near Boston, consisting of about forty families, they made, in the year 1721, near three thousand barrels of cyder; and in another town of two hundred families, in the same year, they made near ten thousand barrels. Some of their apple-trees will yield six, some seven barrels of cyder, at the rate of eight or nine bushels of apples to the barrel; but this is not very common. Mr. Dudley has seen a fine pearmain-tree, which, at a foot from the ground, measured ten feet four inches round, and in one year bore thirty-eight bushels of excellent fruit. The largest apple-tree he found in that country was ten feet and a half in compass.

THE orange pear-tree, according to our author, grows the largest, and yields the fairest fruit. He observed one of these trees near forty feet high, which was six feet six inches in circumference, a yard from the ground, and bore thirty bushels at a time; and he himself had a pear-tree that was five feet six inches round. One of his neighbours had a Bergamot pear-tree, brought from England in a box about the year 1643, which was six feet in compass, and in one year bore twenty-two bushels of fine pears.

THE same gentleman gives us a remarkable instance of an apple-tree in an orchard, which bore a considerable quantity of apples, especially every other year, and yet never had a blossom. For three years he went in the proper season and observed it; and, when all the rest of the orchard was in bloom, he could not see one single blossom upon

upon this tree. Not contented with once going, he went again and again, till he found the young apples perfectly formed. One year he took notice of it early, not knowing but it might blow sooner than the other trees; but he found no blossoms: And the owner, with several of his neighbours, assured Mr. Dudley they had known the tree upwards of forty years, and that it never had any blossom. Our author opened several of the apples, and found very few seeds in them, some of which were lodged single in the side of the apple.

MR. GLOVER, who has given some account of Virginia in the Philosophical Transactions, observes that fruit-trees are very numerous in that country; insomuch that there are few planters without their orchards, some containing twelve hundred trees and upwards, bearing all sorts of English apples, as pearmains, pippins, russetins, marigolds, king's apples, batchelors, &c. of which they make a great deal of cyder. They have also infinite quantities of peaches, with which they feed their swine, (as we have hinted above) and quinces in abundance, both larger and fairer than the English, and not so harsh in taste. They make a drink of the juice of quinces; and they have also apricots, and some sorts of English plums, but these do not ripen so kindly as they do in England. The few pears they have are large and pleasant, and figs grow there as good as in Spain; but it is remarkable that neither oranges nor lemons will thrive there, though they will in more northerly countries. Cherries are as plentiful all over Virginia as they are in Kent, and the trees are generally larger than in England, and bear more plentifully, without digging about them, or pruning. The woods abound in vines, which twine about the oaks and poplars, and run up to the tops.

These

These bear a kind of red grapes, the wine whereof is smaller than French claret; but Mr. Glover is of opinion, that, if some of them were planted in convenient vineyards, where they might be better exposed to the influence of the sun, and carefully kept and pruned, they would produce as good grapes as the claret-grapes of France. There is also in the woods a little shrub with a berry like that of our elder, which is very pleasant to eat; and likewise a tree called chincopin, which bears a nut resembling a chesnut, with a rough husk, but much smaller.

ON the sides of the hills in Virginia grows plentifully a species of asarum, or black snakeweed, the roots whereof are brought over among the true serpentaria Virginiana, and are promiscuously used with them, being diaphoretic and alexipharmic.—Soldanella, or sea scurvy-grass, is found in great plenty on the side of the bay. This herb, being excellently calculated for discharging water, contributes very much to the cure of dropsies and scurvies; and it is likewise used in rheumatic cases. It works very roughly, and much disorders the stomach.—There grows likewise in Virginia an herb called dittany by some, and by others pepperwort. It rises to the height of twelve or eighteen inches; its leaves are very small and shaped like a heart, which shoot out of the stalk and branches directly opposite to each other; and it smells hot, and bites the tongue like pepper. The distilled water of this herb is an excellent remedy against worms, and an ounce of it provokes sweat plentifully.—Here are also found two roots, supposed by the physicians to be turbith and mechoacan, both strong purgatives. Turbith purges tough serous humours from the remote parts, and is therefore of service in the dropsy, gout,

gout and rheumatism. The root of mechoacan is used to purge pituitous, serous, and aqueous humours from all parts of the body, especially from the breast, and the head and nervous system. That is to be chosen which is recent, white, and ponderous.—Our author takes notice of another medicinal plant, about a foot and a half or two feet high, whose leaves are rugged like those of borage, but longer, and it's berries when ripe are yellow. The English call it the fever or ague-root, from it's service in those distempers. A dram and a half of this root newly taken out of the ground, and infused in beer and water for twelve hours, purges with great violence; but a dram of it in powder only excites sweat, and that but moderately. It's taste is a little bitter, and therefore somewhat hot.

IN speaking of the vegetables of America which make a part of the materia medica, we ought by no means to omit saffraas, which is a yellow wood, of a brisk aromatic scent, the produce of a tree, whereof there are vast numbers in Florida, and also in Virginia and other English provinces. The natives of Florida call it pahamwe, and amongst us it has obtained the name of fennel-wood, it's smell somewhat resembling that of fennel. It is principally of use in removing obstructions and strengthening the internal parts, in causing fertility, and curing the venereal disease. It is reckoned a sovereign remedy for catarrhs, and is esteemed in the gout, sciatica, and green-sickness. In some families it has of late grown into fashion as a common tea, which the shavings of it make agreeable enough; but it's reputation of being good in venereal cases is a detriment to it, and prevents a great deal of good which might otherwise be effected by using it more frequently.—Chuse that covered with the thickest, bark, reddish

dish and rough, of a sharp taste, and strong aromatic smell.

IN New Spain, and several other parts of the West-Indies, grow those seeds we call vanillas, vanelloes, or banillas, which are used as an ingredient in chocolate, to which they give a pleasant flavour; and they are also used to perfume snuff and tobacco. We do not find that they enter into any medicinal composition, though Hernandez says they are grateful to the stomach and brain, expel wind, provoke urine, resist poison, and cure the bites of venomous animals.

UPON the bark of a certain tree growing in Nova Scotia, and the more easterly parts of New England, Mr. Winthrop says there are little knobs containing a liquid matter like turpentine, of a very healing nature. The same gentleman mentions a vegetable called silk-grass, the pods whereof are full of a sort of fine cotton, which is used in stuffing pillows and cushions. At the bottom of some of the leaves, there is a hollow knob, breeding a fly like a pismire.

HERE we might enumerate many other vegetable productions of the northern part of America, which are useful in medicine, dying, &c. but the detail would be tedious and insipid; and therefore we shall finish this article with the tulip-tree, which grows wild in several of our colonies, and is a curiosity that deserves to be mentioned. This tree rises to a considerable height, and produces a vast number of flowers, in variety of colours and shape resembling the tulips in our gardens, from whence it's name. It bears no fruit; but, when it is in full bloom, no tree in the world appears more beautiful.

ANIMALS.

A N I M A L S.

WE cannot begin this article more properly than with the moose-deer, which is thought to be peculiar to North America, and one of the noblest creatures of the forest. These deer are found no where in greater numbers than in New England, and Mr. Dudley informs us there are two sorts of them, viz. the common light-grey moose, and the large or black moose. The former, which the Indians call wampoose, are more like the ordinary deer, spring like them, and herd sometimes to the number of thirty together. The black moose, whose hair is dark-grey, is shaped much like the common deer, parts the hoof, chews the cud, has no gall, his ears large and erect, and has a very short bob-tail. These deer are less gregarious, not above four or five being found together. The hunters in New England have taken a buck or stag-moose of the black kind ten feet and a half in height from the withers, and a quarter of this venison weighed upwards of two hundred pounds. A black moose-doe or hind of the fourth year was killed within two miles of Boston, which from the nose to the tail measured between ten and eleven feet, and was six feet eleven inches high. The horns of the moose, when full grown, are between four and five feet from the head to the tip, each horn having seven shoots or branches, and they generally spread about six feet. When the horns, which are shed every year, first come out of the head, they are round like those of an ox, but about a foot from the head they begin to grow a palm broad, and higher up still broader, so that the Indians make ladles of them that will hold a pint. When a moose goes

through a thicket, or under the boughs of trees, he lays his horns back on his neck, not only that he may make his way the easier, but to prevent his being scratched or hurt by the wood. A moose does not spring, or rise in going, as a common deer, but rather shoves along side-ways; and, when he is unharboured, he will run a course of twenty or thirty miles before he turns about or comes to a bay. He is not so swift as the common deer, but will run longer; and, when he is chased, he usually takes to the water. One of these large black mooses has been seen, in his common walking, to step over a gate or fence five feet high.

THE flesh of the moose is excellent food, and, though it be not so delicious as common venison, it is more substantial, and will bear salting. The nose of the animal in particular is reckoned a great dainty; and Mr. Dudley, who eat several of them, says he found them to be perfect marrow. The skin of the moose well dressed makes excellent buff, and the Indians make their shoes of this skin for travelling in the snow. Their way of dressing it is this: After they have haired and grained the hide, they make a lather of the moose's brains in warm water; and, after they have soaked the hide for some time, they stretch and supple it. Nor are the flesh and skin of the black moose the only parts of it that are serviceable, for even the hair on the ridge of his back, which is ten or twelve inches long, is made into good belts by the Indians.—A moose generally brings forth two young ones, which it is said to do standing, and the young fall from the dam upon their feet.

THESE creatures, being very tall, and having short necks, do not graze on the ground like the common deer, horses, cows, &c. and, if at any time they eat grass, it is the top of that which grows

grows very tall, or on the side of a rising ground. In the summer they feed on plants, herbs, and young shrubs that grow on the land, but are most fond of water-plants, especially a sort of wild colts-foot and lilly, which abounds in ponds and by the sides of the rivers. For this food the moose will wade far and deep, and it is by the noise they make in the water that the hunters often discover them. In the winter they live by browsing on the tops of bushes and young trees ; and, being very strong, as well as tall, they will bend down a tree as thick as a man's leg. When the browse fails them they will eat off the bark of some sorts of trees as high as they can reach. They generally feed in the night, and lie still in the day*.

THE Mexican musk-hog, so called from it's scent, is a remarkable animal, found not only in New Spain, but in several other parts of the American continent. Dr. Tyson had one which he had the curiosity to dissect, and he describes it as much less than our common hogs ; for, from the end of the body where the tail should be, if it had one, to the top of the head between the ears, it measured only two feet two inches, and from thence to the extremity of the snout eleven inches. The compass of the body was two feet, that of the neck sixteen inches, of the head in

* To this account of the American moose-deer it is proper to add an observation of Dr. Molyneux in the Philosophical Transactions, who there describes a large pair of deer's horns dug up in Ireland, which from the tip of the one to that of the other were ten feet ten inches wide. These horns he doubts not belonged to a moose ; and, from the number of them found in several parts of Ireland, he concludes that these majestic deer were formerly as frequent in that country, as they are now in New England, Canada, Maryland, and Virginia.

the largest place eighteen inches, and of the snout twelve inches ; for the lower jaw of this hog was more protuberant, and the head less tapering, than in our swine. It's body was of a grizzly colour, and beset with bristles, which were thicker than those of a hog, yet smaller than those of a hedgehog, but resembling them, or the quills of a porcupine, and variegated with rings of black and white. The belly was almost bare, and the bristles on the sides were short, but gradually increased in length as they approached the ridge of the back, where some were five inches long. On the head between the ears there was a large tuft of these bristles, which were mostly black. The ears were about two inches and a half long, and pricking up ; and the eyes, like those of pigs, were small. The snout was like that of a hog, but the mouth small ; and one side of the lower lip was made smooth by the rubbing of the tusk in the upper jaw. The feet and claws were perfectly like those of common hogs. It had no tail, as was intimated above ; but it's greatest peculiarity, and what distinguishes it from any other animal, is the navel or rather foramen on the hinder part of the back. These animals are usually found in the woods and mountains, and go in herds together. They feed on roots, and fruits ; but as the greatest dainty they hunt after all manner of serpents and toads, and, having caught them, they hold them with their fore feet, and with a great deal of dexterity strip off the skin with their teeth from the head to the tail, and then greedily devour them. As an antidote against the poison, they are said to eat the bark of a certain tree ; and by this sort of food they thrive and become fat. They are naturally very fierce ; and, if one of them be wounded, he presently gets to his assistance a great number

number of his kind, and never desists till he is slain or has revenged the injury. They are always at enmity with the tygers, and oftentimes the body of a tyger and several of these hogs are found dead together. If they spy a man, they will attack him fiercely, and his best refuge is to get up a tree, which they will assault most furiously with their teeth; nor will they easily leave him till they are called off by hunger. When they are hunted, they often tear the dogs to pieces. Their flesh is esteemed very good, and is much coveted by the natives. — Some authors call this animal *tajacu*.

THE peculiarity above-mentioned, called the navel, seems to require a little closer observation. It is situated just on the ridge of the back over the hinder legs, and is so covered by the long bristles there, that it cannot be seen without opening or separating them, and then you find a small space almost bare, only beset with fewer, shorter, and finer hairs. In the middle of it is the orifice of the gland, by which it discharges itself of the liquor it separates; and this orifice has it's lips a little reflected and protuberant above the surface of the skin. Dr. Tyson found it would easily admit of a large probe, which could be turned into several parts of the gland; and, upon a gentle pressure with the fingers, it emitted a small quantity of a yellowish juice, which yielded a very agreeable scent, much like that of musk or civet. This gland is of the conglomerate kind, consisting of several other minute glands. It has no considerable cavity within it, but has several excretory ducts, which, terminating at last in one, discharges it's secreted juice by a common orifice. This orifice, having some resemblance to a navel, has imposed upon almost every author that has

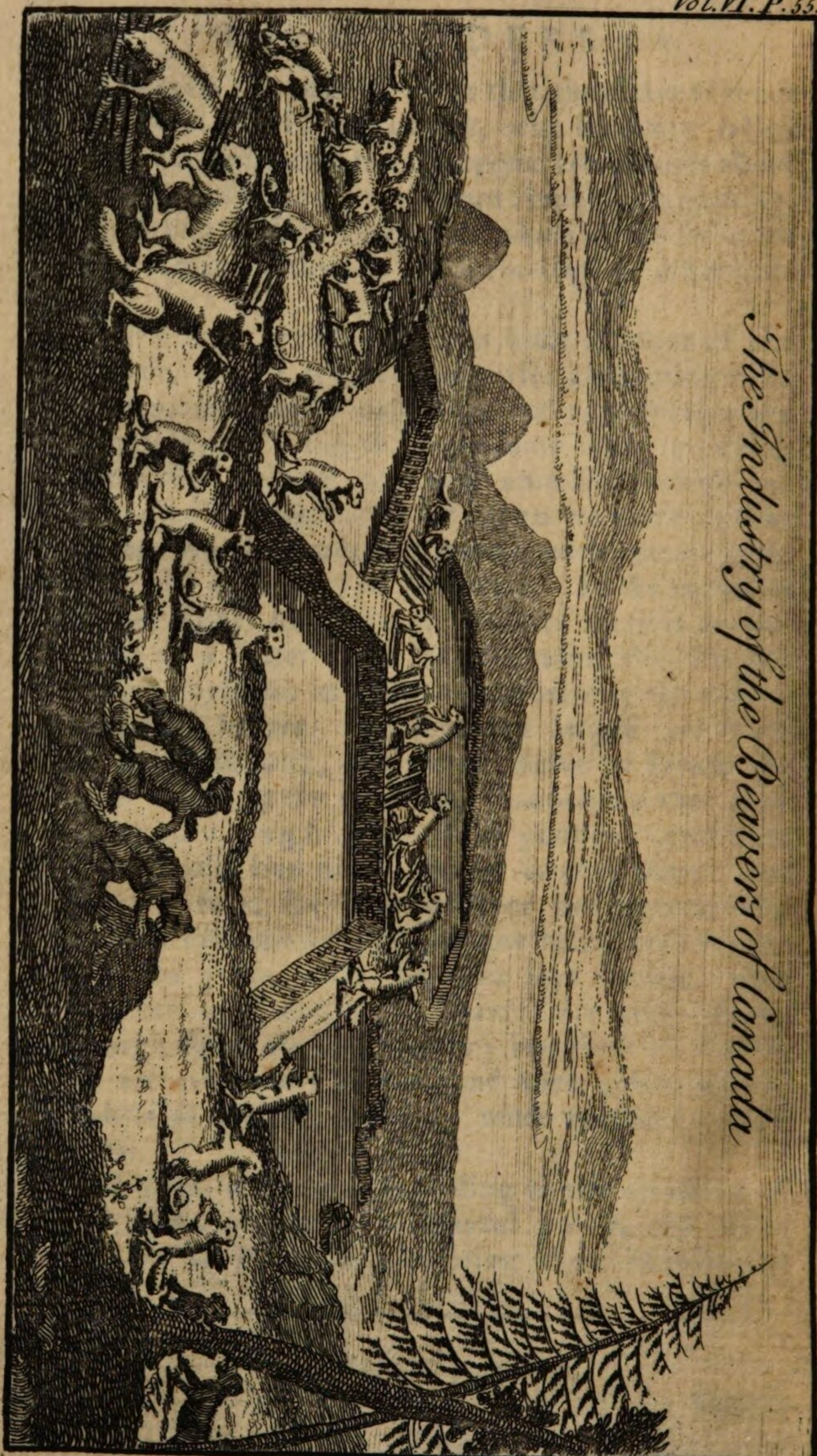
written on this animal, so far that they have taken it for a real navel; and others, who have not fallen into this sentiment, have proposed conjectures about it full as absurd and extravagant: but there is nothing, according to Dr. Tyson, to which it can be more fitly compared than to the scent-bags in other animals.

WE have heretofore given some account of the beaver, and of its bags or purses containing a liquid matter called castoreum, of considerable use in medicine*; but there are some other surprising particulars related of these animals, which we promised to take notice of when we came to Canada, which country abounds with them more than any other part of the world. In the memoirs of the Royal Academy of Sciences there is an extract of a letter from M. Sarrafin, the French king's physician in Canada, concerning the dissection of a beaver. He says the largest are three or four feet long, and about twelve or fifteen inches broad in the chest and haunches; that they commonly weigh about fifty pounds; and that they usually live to the age of twenty years: but Francus says, they live thirty or forty years, and that he had heard of a tame one being kept seventy-eight years. Dr. Sarrafin says farther, that a great way north the beavers are very black, though there are some white; but those of Canada are commonly brown, and their colour grows lighter as they are found in more southern countries.

THESE creatures, according to the accounts of travellers, observe a wonderful polity, and their manner of living and building their habitations

* See Vol. III. p. 77—80.

The Industry of the Beavers of Canada



shews an extraordinary instinct implanted in them by the great Author of nature. In order to raise themselves a convenient abode, they chuse a low level ground, watered with a small rivulet, where, by making dams across it, they can form a reservoir of water and overflow the ground. These dams or causeys are formed by thrusting down stakes five or six feet long, and as thick as a man's arm, deep into the earth; and these they wattle across with tender pliable boughs, and fill up the spaces with clay, making a slope on the side against which the water presses, and leaving the other perpendicular. One of these dikes may be ten or twelve feet thick at the foundation, and they raise it in height proportionably to the water's elevation and plenty. As they are sensible that materials for building are not so easily transported by land as by water, they take the opportunity of swimming, whenever they can, with clay placed on their tails, and stakes of wood between their teeth, to every place where those materials are wanted. If the violence of the water, or the footsteps of the hunters who pass over the work, should damage it in any degree, they immediately visit all the edifice, and with indefatigable application repair and adjust whatever they find out of order: but, if they are too frequently disturbed by the hunters, they only work in the night, or else discontinue their labours.

WHEN the beavers have compleated their causey or dike, they begin to form their cells, which are round or oval apartments, divided into three partitions or stories, raised one above another. The first is sunk below the level of the dike, and is generally full of water; the other two are formed above it. The walls of these houses are upright, and about two feet thick; and they are al-

ways built in stories, that, in case the water rises, the beavers may retire to a higher situation. The materials are the same as they use for the dike; and, as their teeth supply the place of saws, they cut off all projections that shoot out from the stakes beyond the perpendicular of the wall; after which they work up a mixture of clay and dry grass into a kind of mortar, and by means of their tails lay it over the building both within and without. They likewise drive stakes into the earth to fortify the structure against the winds and water; and at the bottom they strike out two openings to the stream, one of which leads to the place where they bathe, and the other is a passage to that quarter where they carry out every thing that would soil or rot the upper apartments. There is a third aperture much higher, calculated to prevent their being shut up when the ice hath closed the openings into the lower lodgments. The dimensions of their houses are proportioned to the number of the intended inhabitants, twelve feet in length and ten in breadth being found sufficient for eight or ten beavers; and, if the number increases, they enlarge the building accordingly. It has been asserted for truth, that there have been found above four hundred of these creatures in different apartments communicating with one another; but these populous societies are very rare, because they are too unmanageable, and the beavers are generally better acquainted with their own interests. They associate to the number of ten or twelve, and sometimes a few more, and so pass the winter together in a very agreeable manner.

THERE are some beavers called terriers, which burrow in the earth, beginning their hole at such a depth under water as they are sensible it will not freeze at; and this they carry on for five or six feet,

feet, just big enough for them to creep through. Then they make a bathing-place three or four feet square, from whence they continue the burrow, always ascending by stories, that they may lodge dry as the water rises. Some of these burrows have been found to be a hundred feet in length. — This is Dr. Sarrafin's account of the terriers, but others say they begin their burrow on the land, and having dug downwards to a proper depth, they then dig horizontally till they come to the water.

THE beavers of Canada have generally completed all their works in August or September, after which they furnish themselves with provisions for the winter. During the summer they regale themselves with all the fruits, plants, and roots the country produces; but against winter they lay up a stock of wood, which they feed upon after steeping it in water, and this in quantities proportionable to their necessary consumption. They gnaw off twigs and branches from the trees, of which the large ones are conveyed to the magazine by several beavers, and the smaller by a single one; and it is observed that they take different ways, each having his walk assigned him, that they may not interrupt one another in their labour. The dimensions of their pile of wood are regulated in proportion to their numbers, and we are told that one of twenty-five or thirty feet square, and eight or ten feet high, is the usual provision for eight or ten beavers. When the wood is soaked in water, they gnaw it into small pieces, and convey it to their cells, where it is regularly divided amongst them. Sometimes they expatiate in the woods, and regale themselves and their young with a fresh collation; for they love green wood better than that which is old and withered: and

the hunters, sensible of this, place a parcel of the former about their habitations, and then have several devices to insnare them. When the winter is severe, and the water frozen over, the hunters sometimes break the ice; and, when the beavers come to the opening for the benefit of the fresh air, they kill them with hatchets; or else they cover the aperture with a strong net, and then overturn their lodge, upon which the poor animals, thinking to escape by betaking themselves to the water, and emerging at the hole in the ice, fall into the snare and are taken.—Many other things are related concerning the sagacity and industry of these creatures, the strength and beauty of their little cities, of the wars which one canton wages against another, and of their putting the most laborious part of their work upon those they take prisoners, &c. All which, though seemingly well attested, are yet looked upon by the generality as too much exaggerated to deserve any credit.

THERE is another animal common enough in several parts of America, called a musk-rat, which is exactly shaped like our water-rat, only somewhat larger. These creatures build houses as the beavers do, in marshes by the water-side, with two or three ways to them; and the inside of them is neatly plaistered. They consist of three stories, so that the rats ascend from one into the other as the water rises. In short, they are in all respects beavers in miniature, and therefore any farther account of them is unnecessary.

IN North America we meet with several kinds of squirrels, particularly one called the ground-squirrel, which is little larger than a mouse, and is finely spotted like a young fawn. It is a sort of dormouse, only different in colour.—Those called fox-squirrels, which are much larger than the English

The History of the



The Flying Squirrel



glish squirrels, are very numerous in Virginia. They are almost as grey as a common rabbit, and are reckoned as good food.—But one of the greatest curiosities of Virginia, though it cannot be said to be peculiar to that country, is the flying squirrel, so called from it's being provided with a skin that can be expanded from each side like a sail, and greatly assists it in leaping from one bough to another; insomuch that, though it is smaller than the fox-squirrel, and even than the least of our squirrels in England, it can jump much farther. M. Klein tells us, that in the year 1727 two of these flying squirrels were brought alive to Warsaw, and presented to Augustus II. king of Poland. The king's physician examined one of them when dead, and caused it's expanded body to be delineated; from a view of which, as represented in the plate, the reader will form a better idea of the animal, than from a verbal description. In the year 1728 M. Klein had one of these squirrels given him, which was taken in the woods on the confines of Russia, and was much less than the common squirrel. It's skin was very soft, of a beautiful dark-grey colour, and it's eyes were large, black, and prominent. It had small ears and very sharp teeth; but, though most of them are mischievous enough, this was pretty gentle, and would not bite, unless it was provoked. They fed it with bread baked without salt, but the fresh tops of birch were it's favourite food, it neither caring for nuts nor almonds. The little creature made it's bed in an elegant manner of the moss of the birch, in which it would lie buried as it were, and not stir from thence in the day time, unless disturbed or thirsty. As to the membrane which may be called it's flying instrument, it might be expanded from each side about the breadth of a palm, and adhered to

the bending of the hinder feet, but was connected with the fore feet by a bony articulation. Upon the whole, M. Klein concludes, that this animal does not properly fly*, but that it can leap from place to place with greater ease than other squirrels, and by means of it's sails continue longer in the air.

THE consideration of the flying squirrel naturally leads us to take a view of some of the feathered race, whom nature has furnished with wings that enable them to expatiate in the air; that is, to fly, in the true and proper meaning of the word. Of all this tribe here is none more deservedly admired than that curious and beautiful little animal called the humming-bird, of which there are several species to be met with in most parts of the American continent, as well as in many of it's islands. The smallest sort of humming-birds, according to Mr. Smith, is considerably less than a wren; and, according to all accounts, it is the least bird in the world. Mr. Hamerfly (in the Philosophical Transactions No. 200.) tells us, that the leg and foot together are but half an inch, and the whole body not quite an inch in length. Upon weighing one as soon as it was killed, it was found to be only the tenth part of an ounce avoirdupoise, which is much about the weight of a sixpence; whereas a

* Such animals are properly called flying as roam about freely in the air, and not such as only leap with agility from one tree to another. Nay, it has been much doubted by some, whether there is any such thing in nature as a flying quadruped; but the common bats put the matter out of dispute, to say nothing of the *dracunculi* preserved in several museums.—Something like the flying squirrel, or perhaps the same, is the *felis volans* (or flying cat) of Scaliger; and of the same nature, but larger, is the *vespertilio admirabilis* (the wonderful bat) of Brontius.

titmouse, the smallest bird in England, weighed above two shillings. The same gentleman tells us, that it's eggs are about the bigness of a pea; and Mr. Winthrop, who weighed two of them, found one to be about five grains, and the other only three and a half. As to it's colours, they are various and surprisingly beautiful, though the bird is differently described by different authors. De Laet represents it as having all the colours of the rainbow, the ends of the wings being of a golden colour, as also it's belly; the sides green as an emerald, with a green tuft of feathers on it's crown, a circle round it's neck as red as a carbuncle, the bills and legs black as jet, and the eyes like diamonds. Mr. Smith says it's colour is like that of a peacock's neck, in that part where the black ground is finely ornamented with a glistening greenish blue; and Mr. Hamersly describes it to be of a shining green colour, somewhat resembling the head of an English drake.—But, though authors differ a little in their descriptions of the humming-bird, all agree that it's plumage is extremely beautiful.

It is natural to suppose this little creature obtained it's name from the humming noise it makes in it's flight, almost like that of a spinning-wheel, occasioned by the swift motion of it's wings; and yet Mr. Hamersly says he never observed any such thing. It is a solitary bird, no more than two being seen together at a time, viz. the male and female; and they are easily distinguishable, the former being somewhat bigger than the latter. They feed by thrusting their slender bill and tongue into the blossoms of trees and other flowers, from whence (like bees) they extract the sweet juices; and this they do upon the wing, hovering over the flower without perching. They can fly very
swiftly;

swiftly; and Mr. Smith tells us he has known one of them give chase to a hawk, though he imagines the diminutive size and agility of the bird were it's only protection. Some writers however represent the humming-bird as formidable to the hawk on account of his sharp bill, which is as fine as a needle, and with which he pierces the sides of his enemy, clinging fast to him with his little talons: but this we apprehend is fabulous.—The nest of the humming-bird is curiously contrived, being made of cotton-wool, in form and bigness like the thumb of a man's glove, and usually built at the extremity of the branches of the tamarind or other trees. These birds are seldom seen on the ground, but fly about the gardens from one flower to another. They are seen only in summer, and are very difficult to keep alive for want of their natural food; though Mr. Clayton says they have been kept, and fed with water and sugar.

THE next curiosity among the feathered inhabitants of North America may be reckoned the mocking-bird, so called from it's imitating the notes of all other birds, which, with the many charming ones of his own, makes him accounted the finest singing bird in the world. There are two sorts of them, the grey and the red, both about the size of a thrush; but the former is most esteemed, as having the softer note. It's feathers are much of the colour of our grey plovers, with white in the wings like a magpye; and it's postures in flying are very odd, sometimes with it's tail upright and it's head down, and sometimes the contrary. It is a brisk bold bird, and yet seems to be of a tender constitution, neither singing in winter, nor in the middle of summer, and with much difficulty are any of them brought to live in England.

England. It sings not only by day, but also at all hours of the night on the tops of chimneys.

IN Carolina are five kinds of hawks, the most remarkable of which is named the herring-tailed hawk, from it's beautiful forked tail; and it is also called the snake-hawk, from it's feeding on snakes, it managing with great dexterity the largest in those parts. It is of the size of a falcon, and is a much longer bird, of a fine aurora colour, with the pinions of the wings and end of the tail of a jet black. They never appear there but in summer, and are very familiar. They will fly for hours together, near the place where the snakes are, till they have an opportunity of killing some of them. They seize the formidable reptile in their talons, near the head, flying and dragging it some distance before they tear it in pieces; and then they devour it. On account of their destroying the snakes, the planters will not suffer them to be killed.

THERE are two sorts of Virginia nightingales, or red birds, the one with a tuft on his head, the other quite smooth-feathered. The cocks of both species are of a pure scarlet, and the hens of a duskyish red.—In the same country they have a bird called a blue bird, being of a beautiful azure colour, and about the bigness of a chaffinch; and they have several sorts of goldfinches, finely variegated with red, orange, and yellow feathers.—There is another bird very injurious to corn, called a black-bird, being as black as a crow, only some of them have scarlet feathers in the pinions of their wings. They seem to be a sort of starlings, for they cry like them, but do not sing, and are much of the same bigness.—The jay of Virginia is less than our English jay, and the body of it is blue, whereas ours is brown. It's wings are curiously

riously marbled, as those of ours are; and it has the same cry, and sudden jetting motion.—In their woodpeckers there is great variety; one species of them is as big as a magpye, with blackish brown feathers, and a large scarlet tuft on the top of the head; besides which there are four or five sorts more, some with green, yellow, and red heads, and others spotted red and white in a very beautiful manner.

IN Virginia, Mr. Clayton informs us there are three sorts of eagles; the largest of which they call the grey eagle, being much of the colour of our kite or glead; the second is the bald eagle, so called because the body and part of the neck and head are only covered with a whitish sort of down; and the third is the black eagle, much resembling those of our own island. These generally build their nests on the top of some tall old tree, stripped of its boughs, and near the side of a river; and the people usually fell the tree when they take the young. When the eagle observes that the fishing-hawk hath struck a fish, he takes wing immediately, and pursues the hawk; which chase affords the spectators an agreeable entertainment, for, as soon as the hawk perceives himself pursued, he screams and makes a terrible noise, till at length, in order to save himself, he drops the fish, which the eagle frequently catches before it reaches the earth or water. These eagles kill young lambs, pigs, &c.—The fishing hawk is a species of the king's-fisher, and much resembles that bird in shape and colour, though it is larger, and not quite so curiously feathered.

SEVERAL sorts of owls are found in Virginia and our other colonies, particularly brown and white owls, which are as large as a goose, and often kill hens and other poultry in the night.

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The white owl has a delicate plumage, the feathers on the breast and back being white as snow, and tipped with a jet black.—They have likewise a large ravenous kind of bird, that feeds on carrion, almost as big as an eagle, called a turkey-bustard, having red gills resembling those of a turkey, from whence it's name. It seems to be a species of the kite, hovering on the wing like that bird, and being carnivorous. It's fat, dissolved into an oil, is much recommended in the sciatica, and any old aches and pains.—Nor ought we to forget their wild turkeys, which are remarkable for their size, some of them weighing fifty or threescore pounds. Their legs are very long, and they run exceeding swiftly. Their feathers are of a blackish shining colour, resembling those of a dove's neck when viewed in the sun-shine.—They have also several sorts of herons, one larger than the English, and feathered like a goose; and there is another species which come only in summer, and are milk-white, with beautiful red legs.—Add to this, that their cocks and hens are for the most part without tails and rumps; and those of the English fowls rot off, after they have been some time in the country.

MR. CLAYTON tells us, that they have several sorts of frogs in Virginia, and one in particular of a prodigious size, being eight or ten times as big as any in England. It makes a noise like the lowing of a bull, or the hollow sound of a bittern. There is another small sort of a frog, says our author, which during the spring makes a noise like pack-horse bells; and a third sort which is green, and will take surprising leaps, on which account it is called the flying frog.

THE blowing snake, which is a sort of viper, has it's name from it's blowing and distending
it's

it's head before it bites. It's poison, without a speedy remedy, is mortal; and there is another dangerous kind of snake called the red snake, it being of a dark brown colour inclining to red. Their bellies are of a dusky white, with a streak of red on each side.

THE horn-snake is another remarkable species, so called from a horn on it's head, with which it gives a wound as mortal as the bite of the rattle-snake.

THAT called the corn-snake, from it's being frequently found in corn-fields, is much like the rattle-snake in colour, but the chequers are not so regular, nor is it's bite so venomous.

WE shall next give an account of the rattle-snake, an animal found commonly enough in most of the warm parts of America; and we shall be the more particular on this subject, as it has afforded matter of speculation and wonder to the most curious inspectors into the works of nature. To begin then with it's name: It is so called from certain joints at the end of it's tail, which fold over each other somewhat like the tail of a lobster; and these being shook by the animal make a rattling noise, from whence it received it's name. The number of these joints or rattles is uncertain, being more or less according to the age of the snake, as some authors assert, imagining that every year there is the addition of a new rattle. However, they seldom exceed twenty, though Mr. Dudley was told by a man of credit, that he killed a rattle-snake, which had between seventy and eighty rattles, with a sprinkling of grey hairs, like bristles, all over his body; and that it was full five feet six inches long, and as big as the calf of a man's leg. Dr. Derham and others have observed, that Providence has wisely given these rattles to this poisonous

sonous serpent, that the noise might be a warning to man and beast to avoid the approaching danger.

THE usual length of the rattle-snake is from three to five feet: Dr. Tyson dissected one four feet five inches long, whose greatest circumference, which was in the middle, was six inches and a half, that of the neck three inches, and near the rattle two inches. The top of the head was flat as in the viper*, and by the protuberance of the jaws it somewhat resembled the head of a bearded arrow. At the extremity of it were the nostrils; and between them and the eyes, but a little lower, were two other orifices, which the doctor took for ears; but he afterwards found they only led into a bone that had a pretty large cavity, but no perforation. The eye was round, and about a quarter of an inch in diameter, over which there was a large scale jetting out, which seemed to serve it for an eye-lid. The scales on the head were the smallest of any, those on the back the largest, increasing in proportion to the thickest part of the body, and thence diminishing again to the junction of the rattle, all of them in figure somewhat resembling the seed of a parsnip. They were of various colours, those on the head being like the feathers on the back of a green-finch, speckled with small black spots, four of which were larger and very remarkable. Those on the back were a dark fillemot and speckled, forming by this mixture a curious chequer-work; but as they grew nearer the end of the tail, they became darker, and at

* Our author, upon the dissection of this snake, found it's parts, both external and internal, so much like those of a viper in almost all respects, that he does not scruple to place it in that class; and from the rattle, which sufficiently distinguishes it from all other serpents, to name it *vipera caudifona*.

last almost black. The scales on the back had an edged rising in the middle, which was still less protuberant nearer the sides, where they were flat. The belly was covered with long scales of a yellowish colour, and speckled with black; but beyond the anus there were some scales of a lead-colour, and from them to the rattle were six rows of smaller scales of the same colour. The scales of the belly were joined together by distinct muscles, the lower tendon of each muscle being inserted into the upper edge of the following scale, and the other tendon of the same muscle inserted about the middle of the preceding scale. To each scale a rib was appropriated, whose point was joined with the extremity of it, which must considerably promote the use for which nature designed them, assisting them to perform their reptile motions; for the scales are indeed so many feet, which, being free and open below, do thereby take hold of the ground. They move quicker on the rocks than on the earth or plains, because there they have firmer footing; but in soft ground, though their belly be flat, they can alter it's figure so as to take the deeper hold, as is observed in a viper. In a word this coat of armour, which is for their defence, is so curiously contrived, that, though it covers the whole body, yet by it's frequent jointings it admits the animal to make various motions.

UPON examining the lungs of the rattle-snake, which consist only of one lobe, the fore part whereof is full of numerous vesicles, and the latter an intire large bladder, our author takes occasion to observe, that, in animals where respiration is not so frequent, nature provides a sufficient store-house for the air in such large bladders, whence it is dispensed as the animal œconomy requires it; for tortoises, vipers, rattle-snakes, toads, &c. which sleep

sleep a great part of the year, as previously to this repose they take in their store of food, so perhaps of air too ; for, whilst they remain thus asleep, and sometimes dead to all appearance, it may be questioned whether they have any motion of those parts which are requisite to draw in fresh air in inspiration. And this seems to be confirmed by the instance of a viper, which remained alive some days after the skin and most of the viscera were separated, and the lungs were not observed all that time to rise or fall, as in inspiration and expiration, but appeared equally extended with air ; only as soon as it died the lungs fell. The stomach of this viper was empty, and so was that of the rattlesnake the doctor dissected, which for four months at least had eat nothing ; so that, though they can live a long time without food, air being necessary for their subsistence, they are provided with the receptacles above-mentioned.

THE head of this snake is small, but the mouth is very large, and it's tongue in all respects like that of a viper, and composed of two long round bodies, joined together from the root two thirds of it's length. They are darted out and retracted again with great agility. To facilitate it's exertion, the under jaw is divided for a considerable space ; for if it were conjoined, as in other animals, and beset with teeth, they would be apt to injure the tongue, or at least it might prove inconvenient to the use it is designed for, which is supposed to be the catching of flies, and other small animals it has a mind to devour. Over the tongue lies the larynx, not formed with that variety of cartilages usual in other creatures, but having a sort of slit for receiving and discharging the air, which, passing only through such a slit, without other organs to modulate it, causes the
hissing

hissing sound emitted by the rattle-snake and other serpents.

THE teeth are of two sorts ; first, the lesser, which are seated in each jaw, and serve the rattle-snakes for the catching and retaining their food ; secondly, the poisonous fangs which kill their prey : and, as they neither chew nor bruise their food, but swallow it whole, they have no occasion for grinders. Of the first sort of teeth there are in the lower jaw two rows on each side, and five in a row, the inward lesser than the outward, and in all twenty : in the upper jaw are only sixteen, five on each side placed backwards, and six before ; and none of those are poisonous. The fatal fangs are placed without the upper jaw, towards the fore part of the mouth, not fastened to the jaw-bones, as the other teeth, but to muscles or tendons, except the two outermost and largest, which are fixed to a bone which may be taken for the ear-bone. These fangs are not to be perceived on first opening the mouth, for they lie flat under a strong membrane or sheath*, but are to be erected upon occasion. They are hooked, and in all of them, especially the larger, there is a hole towards the root, and towards the point a very plain slit, from whence to the root they are perfectly hollow, as the doctor discovered by gently pressing the side of the gum with his finger ; for then the poison rose through the hollow of the teeth, and issued out at the slit. This poisonous liquor is of a water-colour, lightly tinged with yellow.

* Mr. Ranby, who dissected the poisonous apparatus of a rattle-snake, thinks the use of this membrane is to prevent the involuntary discharge of the poison out of the fangs. This gentleman in some particulars differs from Dr. Tyson, but in general his observations agree very well with that ingenious anatomist.

THUS much may suffice for the description and anatomy of the rattle-snake. But it seems proper to add here a few miscellaneous observations of Mr. Dudley's, who says there are three sorts of this snake, distinguished by their colour, viz. a yellowish green, a deep ash-colour, and a black rattin. Both men and beasts, he assures us, are more afraid of a rattle-snake than of any other serpent, and the eye of this reptile has something in it very singular and terrible. Whereas a common snake avoids a man, the rattle-snake never turns out of the way; but as he creeps with his head close to the ground, and moves very slowly, a person may easily get out of his reach. His leaping and jumping to do mischief is no more than extending or uncoiling himself; for in leaping they do not remove their whole body, as other animals do; so that a man is in no danger of them, if his distance be more than their length: nor can they do any harm when they are in their ordinary motion, till they first coil and then extend themselves, which are both done in a moment's time. They are always coiled when they rest or sleep, and they are observed to be exceeding sleepy.

THE same author informs us, that these snakes make the greatest rattling in fair and clear weather, and when it is rainy they make none at all; so that the Indians do not care to travel in the woods in time of rain, for fear of getting amongst them before they are aware. Another circumstance of their rattling has been observed, viz. that if a single snake be surpris'd and rattles, and there be others near him, they all take the alarm, and rattle in like manner.

THEIR common food is toads, frogs, ground-mice, crickets, grasshoppers, and other insects; and the rattle snakes themselves serve for food to bears,

bears; and even hogs will eat them without harm. They are viviparous †, and usually bring forth about twelve.—They cast their skins every year, and generally den among the rocks in great numbers together. They retire on the approach of winter, and come abroad the beginning of next summer; at which time the hunters watch them, and, as they come out to sun themselves, kill them by hundreds.

LET us now consider the surprising effects of the rattle-snake's poison, which is unquestionably one of the most subtle and dangerous in the whole animal kingdom. Of this we have some extraordinary instances given us by captain Hall, who, being in South-Carolina, procured a fine healthful rattle-snake, about four feet long, and with one Mr. Kidwell, a surgeon, and three or four other gentlemen, made several experiments to try the effects of it's poison. They got three cur-dogs, the largest not bigger than a common harrier; and, the snake being tied and pinned down to a grass-plat, they took the largest of the dogs, and, having tied a cord round his neck so as not to strangle him, the captain held one end, and another person the other. Immediately on bringing the dog over the snake, he raised himself near two feet, and bit the dog as he was jumping. The dog yelped, by which the captain perceived he was bitten, and, pulling the dog to him as fast as he could, he found his eyes fixed, his tongue between his teeth, which were close; his lips drawn up so as to leave

† This is a confirmation of the rattle-snake's being of the viper kind, for it is observed, that vipers bring forth their young alive, whereas common snakes lay their eggs in dung-hills, or other places proper to hatch them by their warmth, and therefore are reckoned amongst the oviparous animals.

his teeth and gums bare; and, in short, he was quite dead in a quarter of a minute. They could not see where the bite was, nor observe any blood; upon which ordering some hot water to scald the hair off, they discovered only one puncture, with a bluish-green colour appearing a little round it. This was just between his fore legs and his breast, where the hair was thinner than in some other places.

HALF an hour after this they took a second dog, which was somewhat smaller, and brought him in like manner over the snake, which bit his ear, so that all the company saw it. The dog yelped much, shewed signs of being very sick, reeled and staggered about for some time, then fell down and struggled as if convulsed, and for two or three times got up, each time wagging his tail, though slowly, and endeavouring to follow a negro-boy, who used to make much of him. They put him into a closet, and ordered the boy to look after him, who brought word in two hours that the dog was dead.

ABOUT an hour after the second dog was bitten, they took the third in like manner, which the snake bit on the right side of the belly, so that he drew blood. The dog for about a minute did not seem to be hurt, so they let him go, and saw no more of him; but the next day a woman, who owned him, came to the captain, complaining of his cruelty for killing her dog.

FOUR days afterwards they got two dogs, as big as common bull-dogs; and the first, which the snake bit on the inside of his left thigh, died exactly in half a minute, according to the watches of two gentlemen present. There were two very small punctures in his thigh, which looked livid, though no blood was drawn.—The second dog

was bit about an hour after the first, on the outside of his thigh, where they perceived blood at two places; he soon sickened, and died in four minutes.—As they thought the snake's poison was not spent, they got a cat, which he bit an hour after. She was very sick, and they put her in a closet; but by some means or other she got out, and the next morning was found dead in a garden.

A month after these experiments were made, the captain procured a common black snake, not of the viper-kind, about two feet and a half long, and just taken; and, putting this and the rattlesnake together, he irritated them so that they bit each other. He perceived that the black-snake had drawn blood of the rattlesnake before he took them asunder; the black snake died in less than eight minutes, but the rattlesnake did not seem sick, or at all the worse for his wound.

THE last experiment the captain made with this snake was to try whether his poison would not prove mortal to himself. In order to this he hanged him in such a manner that he was not above half his length on the ground, and then so irritated him by pricking and scratching him with two needles fastened to the end of a stick, that he soon bit himself, after having several times attempted to bite the stick. He then let him down, and he was quite dead in eight or ten minutes. The snake was then cut into five pieces, and given to a hog, the head part first, in the sight of several people. The hog eat up all the snake, and ten or twelve days afterwards the captain saw the hog alive and healthful; which confirms the account of Mr. Dudley above-mentioned.

WE might give many other instances of the strange effects of this subtle poison, but these are abundantly sufficient. As to the cure of the bite
of

of the rattle-snake, it is natural to think, that, if death follows it in so short a time, no remedy can reasonably be expected: but why might not olive-oil, if immediately applied to the wound, be as certain a cure in this case, as it has been found to be for the bite of a viper *, especially as the rattle-snake is of that kind, and probably their poisons much of the same nature? However, be this as it may, it is wisely ordered by Providence, that the countries infested by these noxious animals produce effectual antidotes against their poisons; and the Americans are not without a specific even against the most sudden efforts of this dangerous poison, viz. the serpentaria, or snake-root, of which there are various kinds, as that of Virginia, that of Brasil, that of Canada, &c. Those who travel or hunt in the woods carry this root constantly about them, to chew and swallow as soon as they are bit by a rattle-snake, the stagnation of the blood being prevented by it's peculiar activity. Nay, we are told, this root not only cures the bite of the rattle-snake, but that the animal flies at the smell thereof; for which reason travellers carry it with them on the end of a staff, to present towards the snake if he chance to come in their way.

THE account we have of the discovery of the virtue of this root in curing the bite of the rattle-snake is this: A nation of the northern Indians, called Senekkas, observing that the root and flowers resembled the rattle of the snake, concluded that Providence had impressed that characteristic to point out it's use. These Indians, returning from a war with a southern nation, called Cata-

* See remarkable instances of this kind in Vol. V. p. 26—28.

whaes, in the year 1712, communicated the efficacy of this root to a planter on the frontiers of Virginia, who imparted it to his neighbours, and so it was soon known through those parts of America. And hence a particular species is named Senekka rattle-snake root, to distinguish it from other species which are much inferior in virtue.

AFTER all, so speedy are the terrible effects of this snake's poison in many instances*, that it is the opinion of Capt. Hall, a judicious and observant person who lived several years in Virginia, that the safest and surest way of cure is to cut out immediately the part where the wound is made; for he has seen several, who, following that method upon being bit, have carried hollow scars about them, as marks of the narrow escapes they had had, and they never felt any inconveniency afterwards.

BUT, though we have said so much of the rattle-snake, we have not yet done with that animal; for, besides the surprising effects of it's poison, there are others attributed to it's eyes almost equally astonishing, which ought not to be passed over in silence. The effects that we mean are said to be produced by a certain fascinating or bewitching

* To the instances already given of the strength and virulence of this poison on animals, let us add another of the same on a vegetable body, which is mentioned by Col. Beverly, who says he was informed by Col. Taylor, that, being in company with others in the woods, they found a rattle-snake, and cut off his head. Then with a green stick which he had in his hand, about eighteen inches long, the bark of which was newly peeled off, he urged and provoked the head, till it bit the stick with fury several times; whereupon the colonel observing small green streaks rise up along the stick towards his hand, he threw it on the ground, and in a quarter of an hour it split into several pieces, and fell asunder from end to end.

power in the eyes of the rattle-snake, which, by keeping them fixed on any small animal, as a squirrel, a bird, or the like, though sitting on the branch of a tree, at a considerable height, can draw such animal down into it's mouth. This perhaps may seem utterly incredible to people who have never heard or considered any accounts of this nature; but it is commonly asserted that all sorts of snakes have some degree of this faculty of charming or fascinating other animals by looking stedfastly upon them.

COL. BEVERLY tells us, that, as he was hunting in the woods, and had strayed from his companions, he was entertained at his return with an account of a pleasant rencounter between a dog and a rattle-snake about a squirrel. The snake had got the head and shoulders of the squirrel into his mouth, which being something too large for his throat, it took him up some time to moisten the furr of the squirrel with his spawl, to make it slip down. The dog took this advantage, seized the hinder parts of the squirrel, and tugged with all his might. The snake on the other side would not let go his hold for a long time, but at last gave up his prey, and the dog eat the squirrel without any injury.

THE same gentleman assures us, that several persons have seen squirrels run down a tree directly into a snake's mouth; and have also seen birds fluttering up and down, and chattering at these snakes, till at last they dropped down before them. But, besides the relations of others, he gives a very remarkable instance of this fascination, whereof he himself was an eye-witness, with two other persons in company. Having stopped at an orchard by the side of the road, they were entertained (he tells us) with the whole process of a charm

between a rattle-snake and a hare, the hare being better than half-grown. It happened thus: One of the company, searching for the best cherries, spied the hare sitting, and though he went close by her she did not move, till he (not suspecting the occasion of her tameness) gave her a lash with his whip; upon which she ran three or four yards, and there sat down again. The gentleman, not finding the fruit ripe, immediately returned the same way; and near the place where he struck the hare he spied a rattle-snake. Still not suspecting the charm, he went back about twenty yards to a hedge, to get a stick to kill the snake; and at his return he found the snake removed and coiled in the same place from whence he had moved the hare. This put him into the thought of looking for the hare again, and he soon spied her about ten feet distant from the snake, in the place to which she had started when he whipped her. She was now lying down, but would sometimes raise herself on her fore feet, struggling as it were for life, to get away, but could never raise her hinder parts from the ground; and then she would fall flat on her side again, panting vehemently. The hare and snake were in this condition when our author was called, who says, that, though all three went within five yards of the snake to have a full view of the whole, the snake did not take the least notice of them, nor so much as give a glance towards them. There they stood at least half an hour, the snake not altering one jot; but the hare often struggled to get up and fell on it's side again, till at last she lay still for some time as dead. Then the snake moved out of his coil, and slid gently and smoothly towards the hare, his colours at that instant being ten times more glorious and shining than at other times. As the snake moved along,
the

the hare happened to make another struggle, upon which the snake made a stop, lying at his length till the hare was quiet, and then he advanced till he came up to the hare's hinder parts, which in all this process had been towards the snake. There he surveyed the hare all over, raising part of his body above it; then he turned off and went to the nose, and after that to the ears, which he took into his mouth one after the other, working them as a man does a wafer to moisten it. He then returned to the nose, and took the face into his mouth, straining and gathering his lips, sometimes on one side, and sometimes on the other. At the shoulders he was along time puzzled, often pulling and stretching the hare out at length, till at last he got the whole body into his throat. The spectators then advanced, and our author, taking the twist-band off his hat, made a noose, and put it about the neck of the snake. This at last made him very furious; but having secured him they put him into one end of a wallet, and carried him on horseback five miles to the house where they lodged that night; and next morning they killed him, and took the hare out of his belly. The head of the hare began to be digested, and the hair to fall off, having lain in the snake's belly about eighteen hours.

HERE seems to be a plain instance of the fascinating or enchanting power in the rattle-snake; but Sir Hans Sloane thinks the whole mystery of the affair is chiefly this, that, when such animals as are the proper prey of these snakes, as small quadrupeds, birds, &c. are surprised by them, they give them a bite, and the poison allows them time to run a small way, or perhaps a bird to fly up into the next tree, where the snakes watch them with great earnestness till they fall down, or are perfectly dead, when, having licked them over

with their spawl or spittle, they swallow them down.

Now we grant that Sir Hans's conjecture is natural enough, and perhaps the hare above-mentioned might have been surpris'd and bit by the rattle-snake, before it was affected in such a manner: but still there are many instances of what we call fascination, not only in the rattle-snake but in other animals, where no previous bite or other injury has been received by the animal enchanted. Dr. Sprengell's account seems to be such an instance, who tells us, that at Milan he met with a viper-catcher who generally kept a considerable number of these animals alive in a back room open at top; and, having one day got a female viper big with young, a mouse was thrown in amongst them; but of the whole number of vipers, which were upwards of sixty, not one concerned himself in the least about the mouse, till the pregnant female viper and the mouse interchanged eyes, as the doctor expresses it. Upon this the mouse startled; but the viper rais'd her head, and turned her neck into a perfect bow, her mouth open, her tongue playing, her eyes all on fire, and her tail erect. The mouse seem'd soon recovered of it's fright, and would take a turn or two, sometimes more, pretty briskly round the viper, giving now and then a squeak, till at last it ran swiftly into the chops of the viper, and gradually sunk down the gullet. All this while (adds the doctor) the viper never stirr'd out of her place.

If this be not sufficient to prove the fascinating power of some animals, take another instance from a late author, who assures us he has seen a mouse running round a large toad, which stood looking earnestly at it, with it's mouth open. Still the mouse made less and less circles about the
toad,

oad, crying all the while, as if compelled there-to; and at last, with a great deal of seeming reluctance, ran into the gaping mouth and was swallowed.

SOMETHING of this kind almost every one may have observed in the setting-dog, the effects of whose eye on the partridge are very remarkable. The poor bird, when once it's eyes meet those of the dog, stands as if confounded, regardless of itself, and easily lets the net be drawn over it. And we have read of squirrels so stupified and overcome by a dog's staring hard at them, that they have dropped from the tree into his mouth.—Add to this, that man is not secure from the like affections, as almost every one knows from experience; for there are few people but have, one time or other, felt the effects of an angry, a fierce, a commanding, a disdainful, a lascivious, an intreating eye, &c. And it is chiefly owing to this sort of fascination (if we may be allowed a little pleasantry) that the beautiful women of Lancashire have obtained the name of witches.

AMONGST the curious animals of North America we may reckon the little insect which affords that valuable drug called cochineal, of great use in dying crimsons and scarlets, and esteemed in medicine as a cardiac and alexipharmic. Naturalists have been strangely divided with respect to the origin of cochineal, some referring it to the vegetable, and others to the animal kingdom; to which last it is now proved to belong by incontestable evidence: For, a dispute arising between Melchior de la Ruuscher and a friend of his on this subject, the former procured from Antequera in New Spain (the place where there is the greatest trade for this drug) the attestations upon oath of eight persons, who had been for many years immediately

diately employed in managing and propagating cochineal, from whence we learn the following particulars. First, they are small animals, with a beak, eyes, feet, and claws; that they creep, climb, seek their food, and bring forth young, without that transformation observable in silk-worms and other insects. When they first begin to move they are no larger than nits or small mites, or the point of a needle; but, when come to maturity they resemble a dog's tick both in size and figure. Thus far is certain, but the manner of their generation is doubtful; though it is commonly believed by those who cultivate them, that they are impregnated by a small butterfly, which is bred upon the nopal, (the plant they feed upon) and which is observed to pass and repass over them frequently.

WHEN these little animals can bear the open air, which is early in the spring, they soon grow large enough to produce young ones; at which time they put twelve or fourteen together into a paste or little nest, made of fine soft hay or straw, or the moss of trees, or the down that immediately incompasses the cocoa-nut. These nests are placed upon the nopal, or prickly Indian fig-tree, which is carefully cultivated for this purpose; and in three or four days a great many young ones are produced, after which the old ones die. The young ones, coming out of their nests, climb up the nopal, fix themselves to it, and suck it's juice, which is their only nourishment, for they do not eat the plant; and therefore they seek out those parts of it that are greenest and fullest of juice, taking care to place themselves so as to be screened from the wind and weather. During this time, whilst they are growing up and become pregnant, great care is taken that no vermin incommode or hurt them, and also to keep them clean, and disengage

engage them from certain threads like cobwebs, that grow upon the nopal. They are likewise to be sheltered from too much heat or cold, and from the rain and wind, for the finest of these insects are very tender. The wild sort indeed bear all these inconveniencies; but then they are gritty, of an ill smell, and of little value.

As to the gathering of cochineal, they first take the females, which die in the nests, after having brought forth their young; and three or four months after this, as the season permits, when the first young ones are become large enough to bring forth, and have produced some few, the Indians carefully gather them off the nopal with a small brush like a pencil. Being thus collected, the little creatures are killed by hot water or fire, and are called the second gathering, or rather the first of the young ones that have been nourished and raised in the open air. In three or four months more they gather the second brood of those that have been brought forth upon the nopal, and have likewise produced some young ones; which is done much in the same manner as before, only now they take from the plant a great many young ones with their parent insects; and, from the number of small ones found amongst this gathering of cochineal, it is called granilla. In the meantime they keep a number of these young ones alive upon the nopals, which they pluck up or cut down, and take them into their houses, in order to nourish the insects during the rainy season. Lastly, when these are grown large, they put them into the pastles, and proceed in the manner above related; so that they usually make three gatherings in a year.

THE manner of planting the nopal, is, by making rows of holes about half a yard deep, and

two yards distant from each other. In each of these holes are placed one or two leaves of the Indian fig-tree, in a flat position, and then they are covered with earth. This leaf soon shoots up into a single stem, which, during it's growth, divides into several branches, which successively produce fresh leaves, the largest being nearest the stem, and full of knots, as are also the branches; and from these the leaves have their origin. The plant seldom exceeds three yards in height; it's blossom is small, of a bright red, and in the shape of a bud, from the center of which proceeds the fruit. When the fig is ripe, the outward skin becomes white, and yet the pulp is so fully impregnated with a deep red, as to tinge the urine of those who eat it; yet few fruits are more pleasant and wholesome. It is remarkable that this insect does not, in any visible manner, injure the plant, it extracting it's nourishment from the most succulent juice, which it sucks, by means of it's proboscis, through the fine teguments of the leaves.

THEY have three ways of killing these insects, in hot water; in little ovens made for that purpose; or by roasting them upon flat stoves with fire under them, such as the Indian women use to bake their bread. These three different methods give the cochineal three different colours. The first makes it of a brown red, the hot water taking off the whiteness that covers the insect when alive. The second makes them of an ash-colour, and marbled; and the third makes them black as if they had been burnt.—Of the old ones that die after bringing forth their young, four pounds, when dried, produce but one, or rather one pound is reduced to four ounces: but three pounds only of the living ones, that have been carefully taken off

off the nopals, being killed and dried, produce the same quantity.

HOWEVER, it seems proper to observe, that, though cochineal is now known to be produced by an animal, there is a berry growing in America which yields a dye almost as beautiful as that of the insect. The first shoots of the tree produce a yellow flower, then comes the fruit, which is long, and opens when ripe with a cleft of three or four inches. This fruit is full of kernels or grains, which fall on the least agitation, and are carefully gathered up by the Indians. Eight or ten of these fruits will yield about an ounce of grain; and a person may easily take it for the animal cochineal, but this last is much the most esteemed.

As we are now speaking of insects, it may not be amiss to introduce here an account of a method in New England of discovering the hives or nests of bees in the woods, in order to get their honey. For this end the hunter (as we may call him) in a clear sun-shiny day takes a plate or trencher with a little sugar, honey, or molasses, and, when got into the woods, he sets it down on a rock or stump of a tree. This is soon found out by the bees, which are generally supposed to smell honey or wax at above a mile's distance. When they are gathered about the plate, and have fed a little while, the hunter secures a few of them in a box or other conveniency; and after a short time he lets one of them go, observing very carefully the course he steers; for, after he rises in the air, he flies directly on upon a strait course to the tree which contains the hive or nest. Now, the hunter being provided with a pocket-compass, a rule, and other implements, with a sheet of paper, he sets down the course of the bee, supposing it west, or
any

any other point; and by this he is sure the tree must be somewhere in the west line from his station: but, to know the exact distance he removes from thence either north or south, suppose a hundred perches, or, if it be more, it will be the more exact, because the angle will not be so acute. He then lets go another bee, observing the course carefully; for this, like the first, after mounting to a convenient height, flies directly to the hive; so that the hunter has nothing to do but to find where the courses of the first and second bee intersect each other, and there is the tree where the honey is lodged.

ALL this is founded on the straight or direct motion of bees when bound home with their honey, which is found to be certain by the constant observation and experience of the hunters, who of late have used this mathematical way of finding honey in the woods with great success. But it is worth observing, that all the bees they have either in their gardens or woods, which are now in great numbers, are the produce of such as were carried from England about a hundred years ago; for the first planters in New England, as Mr. Dudley informs us, never observed a bee in the woods till many years after the country was settled: And what proves this beyond dispute is, that the Indians have no word in their language for a bee, as they have for all animals that are natives of the country, and therefore used to call a bee by the name of the Englishman's fly.

WE have long ago described the whales that are found in the seas of Greenland, and the method of taking them*; but there are several

* See Vol. III. p. 5—8.

curious particulars relating to those found on the coast of New England, which Mr. Dudley has obliged us with, and which ought by no means to be omitted. There are several sorts of whales on this coast, of which the most remarkable are the true whale, or that which yields the whalebone, and another which furnishes us with the sperma-ceti. The whalebone whale is sixty or seventy feet long, (for these are not so large as those of Greenland) and very bulky, having no scales, but a soft smooth skin, and no fins, except one on each side, from six to eight feet in length, which they are not observed to use, unless in turning themselves, and while they are young, and are carried by their dam on the flukes of their tails; for then with those fins they clasp themselves round about her, otherwise they would be in danger of falling off. This fish when first brought forth, is about twenty feet long, and of little value, but then the dam is exceeding fat. At a year old, when they are called short-heads, they are very fat, so as to yield about fifty barrels of oil; but by that time the dam is very poor, and will not yield above thirty barrels, though of a large size. When two years old they are called stunts, being stunted after weaning, and then generally yield from twenty-four to twenty-eight barrels. After this they are called scull-fish, their age not being known, but only guessed at by the length of the bone in their mouths. This grows on each side of the upper jaw, and is sometimes six or seven feet in length. A good large whale has yielded a thousand weight of bone, a hundred and thirty barrels of oil, and near twenty out of the tongue alone.

THE whale producing sperma-ceti, or parma-fitty, as it is commonly called, is much of the same dimensions

dimensions with the former, but is of a greyish colour, whereas the others are black. He has a bunch on his back as big a man's head, and is distinguished from the former kind of whale by having no whalebone in his mouth, instead of which there are rows of fine white teeth in each jaw, five or six inches long. Our author sent the Royal Society one of these teeth, taken from a whale forty-nine feet long, and whose head yielded twelve barrels of sperma-ceti oil. These are more gentle than the other species of whales, and seldom fight with their tails, but, when struck usually turn upon their backs and fight with their mouths. The oil made of the body of this fish is much clearer and sweeter than that of other whales.

THE sperma-ceti, as our author calls it, which makes this fish so valuable, lies in a large trunk four or five feet deep, and ten or twelve feet long, near the whole depth, breadth, and length of the head, in the place of the brains, and seems to be the same, it being disposed in several membranous cells, and covered with a thick gristly substance below the skin, through which they dig a hole, and take out the clear oil. It is found indeed in other parts of the fish, but not in so large quantities nor so good as in the head, where it is thoroughly prepared by nature; and it is affirmed that this trunk or cavity will yield from ten to twenty barrels, and the whole fish from twenty to fifty barrels of the common oil.

THE ancients were great strangers to the origin of the sperma-ceti, insomuch that Schroder seems to doubt whether to reckon it an animal or mineral substance. And indeed the method of preparing it at present is a secret in the hands of a few persons, according to Pomet, who describes the process

process to be as follows. The oil or brain, being taken out of the animal, is melted over a gentle fire, and put into moulds like those wherein sugar-loaves are formed. When cold and drained it is melted over again; and in this manner they proceed till it be well purified, and become very white. Then with a knife, made for that purpose, it is cut into scales or flakes, such as we have it from the druggist. Now Pomet may possibly be right as to the process generally used, but Dr. James says he has seen sperma-ceti which has undergone no treatment at all, except being put into paper-bags, so that the oil that adheres to it might be absorbed.

THE true sperma-ceti is very white, and in very small flakes, which by rubbing upon the hand dissolve into a sort of oil, and do not adhere to the palate when chewed, as the common sort will, which is probably adulterated with wax or some other substance. In many cases sperma-ceti is a noble medicine, but is principally used in bruises, inward hurts, and after delivery. It is an excellent balsamic in disorders of the breast; and in coughs, sharp rheums, &c. it is very safe, pleasant, and effectual; as also in pleurifies and inward imposthumations. Outwardly used, it is emollient and healing; but its greatest use this way is in the small-pox, melted with the oil of almonds. With this the pustules are just kept moist when they begin to harden; and it wonderfully prevents those scars they are apt to leave behind them. It is sometimes also used as a cosmetic by the ladies, both in paints and washes; and candles are likewise made of it, which are superior to the finest wax-candles in colour and lustre.

THE people of New England, says Mr. Dudley, used formerly to kill the whales near the shore;
but

but now they go off to sea in sloops and whale-boats, in May, June, and July, between Cape Cod and Bermudas, where they lie by in the night, and sail to and again in the day-time, and seldom miss of them. The best season for taking the whalebone kind is from the beginning of February to the end of May, and for the sperma-ceti whale from the beginning of June to the end of August.—The boats they use in pursuing the whale are made of cedar clap-boards, and are so very light that two men can easily carry them, though they are twenty feet long, and contain six men, viz. the harpooneer, four rowers, and the steersman. These boats run very swiftly, and by reason of their lightness can be readily brought on and off, and so kept out of danger. Sometimes the whale is killed with a single stroke, and sometimes will hold the whalers in play for half a day together, and even make their escape after they have been lanced and have spouted blood, which is a sign they have received their mortal wound. The bone-whales have two spout-holes, but the sperma-ceti whales have only one.

THE prodigious strength of the whale lies chiefly in his tail, of which Mr. Dudley and other authors give us variety of instances. A boat has been cut down from top to bottom with the tail of a whale, as if cut with a saw, the boards being scarce splintered. An oar has been cut off while a man had it in his hand, without feeling the least jarring.—But one instance of the strength of this animal, as related by Mr. Dudley, will be sufficient, instead of many that might be added. Some years ago one of the fin-back whales, a species found on the coast of New England, came into a harbour near Cape Cod, and towed away a sloop of about forty tons out of the harbour
into

into the sea. It is supposed the whale was rubbing herself against the fluke of the anchor, or accidentally got the fluke of the anchor into the orifice of the uterus, and, finding herself caught, tore away with such violence, that she towed the ship out of the harbour as fast as if it had been under sail with a good gale of wind, to the astonishment of the people on shore, for there was nobody on board the vessel. When the whale came into deep water, she plunged downwards, and had like to have carried the sloop along with her; but the cable gave way, and so the sloop was recovered and brought back into the harbour. This whale was found dead some days after upon the shore, with the anchor sticking in her belly.

THE whalebone whales are generally supposed to live upon some oozy matter they suck up from the bottom of the sea; but an experienced fisherman told Mr. Dudley, that he had observed this whale, in still weather, skimming on the surface of the water, to take in a sort of reddish spawn that sometimes lies on the sea for a mile together. The sperma-ceti whale, besides other fish, feeds much upon a small fish, which has a kind of bill, and is called by the fishermen a squid-fish. The fin-back whale, which has a larger swallow than the other species, lives on mackarel, herrings, and such sort of fish, great shoals of which he will run through, and with a short turn cause an eddy or whirlpool, whereby the fish are brought into a cluster, and the whale will take in some hundreds of them at a time.—It is to be noted, that, though whales are gregarious, and are sometimes seen a hundred in a company, the several kinds do not mix with one another, but keep by themselves.

IN speaking of the whales of Greenland we observed, that these animals copulate much like quadrupeds, bring forth their young alive, and suckle them with their milk * ; and this is confirmed by Mr. Dudley's account of the New-England whales, which are therefore termed bull, cow, and calf. When the female couples with the male, she throws herself upon her back, sinking her tail, and so the male slides up, and then she clasps him with her fins. They bring forth but one at a time, and only every other year, and are supposed to go with young about nine or ten months. The calf or young whale has been found perfectly formed in the dam when not above seventeen inches long, and white ; but, when brought forth, it is usually twenty feet long as already mentioned, and of a black colour. The female has two teats, six or eight inches long ; and, when she suckles her young, she turns herself almost upon her back, upon the surface of the water. Her milk is white, and, upon opening a young sucking whale, it has been found curdled in his bag, just like that of a calf. For the first year they all suck the dam, but live, after they are weaned, in the manner above related.

THE care the females take of their young is very remarkable. They not only carry them on their tails, and suckle them, but often rise with them to the top of the water for the benefit of the air, and when they are chased they will not strike with their tail ; but, if the young one happens to drop off, the dam turns about, and passing underneath takes it on again. If their young be ever so much wounded, as long as they perceive any life in them, they never forsake them ; and therefore

* See Vol. III. p. 6.

care is taken, by those who kill these fish, not to kill the young one, till they have first secured the dam; for if, the young whale be killed first, the dam grows so very outrageous that it is almost impossible to manage her. When pursued, they will keep under water for half an hour or more; but, if a female have a young one on her tail, she rises oftener, that it may take breath; otherwise, when not disturbed, they usually rise and blow about once in a quarter of an hour, spouting out water, and drawing in fresh air.

MR. DUDLEY farther informs us of a sort of fish that prey upon whales, often killing the young ones, though they seldom venture upon the old ones, unless they are much wounded. The whalemen of New England call these fish whale-killers, for they go in company by dozens, and will set upon a young whale and bait him like so many bull-dogs, some laying hold of his tail, others of his head, and so bite and worry him, till, being heated he lolls out his tongue, which some of them are sure to catch at; but, if they miss their aim, they fasten on his lips, and thus torture him till they have killed him. When they have done this, they feed chiefly on his tongue and head, but leave him when he begins to putrify. These killers are from twenty to thirty feet long, and have teeth in both jaws that lock within each other. They are of such vast strength, that, when several boats together have been towing a dead whale to shore, one of them has fastened his teeth in it, and dived with it in an instant to the bottom.

BEFORE we dismiss this subject, it seems proper to add Mr. Smith's account of the sword-fish* and thrasher, two allied enemies of the grampus,

* See a description of the sword-fish in Vol. III. p. 10, where we have also taken notice of its enmity to the whale.

a species of whale frequenting the seas of North America. He says he has often been an eye-witness of the battles between these allies and their common enemy the grampus, who as naturally encounter each other when they meet at sea, as the elephant and rhinoceros do at land. The sword-fish gets underneath the grampus, and pricks him in the belly, till he rises to the surface of the water; and then the thrasher mounts his back, and beats him sharply with his tail. Our author was once within less than a hundred yards of a fight between these creatures, and assures us they caused the spray of the sea to fly up very violently all round them; but, to the best of his discernment, the thrasher seemed to fight with a weapon about three yards long, like a monstrous broadsword, issuing from his nose, and not with his tail, as is commonly reported.

THE mention of these fishes, which are in a perpetual state of war with each other, puts us in mind of the dolphin and flying-fish, which are common in the American seas, and indeed in many parts of the Atlantic ocean. The flying-fish, according to Sir Hans Sloane, is of the herring-kind; but Mr. Smith describes it as somewhat longer than a herring, and somewhat thicker and rounder in body. It has a fin on each side close to the gills, about four inches long, being broadest as well as a little rounded at the extremity. When these fishes are chased by a dolphin, or other fish of prey, they evade the pursuit by flying out of the water; and this flight they continue so long as their fins keep wet enough, which is perhaps for thirty or forty yards †, and usually in a straight line.

† Mr. Moore, who saw abundance of these fish in his voyage to Africa, gives the same account as to their flying no longer

line. They move their fins as nimble as bees do their wings, so as scarce to be perceived; and, as they are of a very bright shining colour, they look exactly like so many pieces of polished silver darting through the air. Their flight, Mr. Smith supposes, is not extraordinary good when they are out of the water, because two or three of them fell upon the ship he was on board of, in which case they are utterly disabled from rising again; but why might not this proceed from their fins growing dry, and rendering them incapable of flying any farther?

MR. GROSE observes, that he doubts whether what is called their flight is not more properly an extended leap, like that of the flying-squirrels on shore, to whom the expansion of a membranous fold, that makes part of the skin of their hind legs, serves for a kind of wings; and that their necessity of replunging into the water, is not so much owing to their fins drying, in so short a space as twenty-five or thirty yards, as to the force of their spring being spent. There are many fish, besides these, that take very considerable leaps out of the water, though not of such a length as they do, from their side fins not being so well adapted for the continuance of a motion, compounded of flying and leaping. So far is certain, he adds, that they have no guidance from their sight, but are urged headlong onward by a mechanical impulse, insomuch that they do not unfrequently fall into ships, and especially in the chains, which, being lower than any part of the gunnel, stop and receive them. They are very well tasted, and often

longer than their fins are wet; but he believes some of them flew half a mile on a stretch.

seen

seen in great shoals flying from the pursuit of the bonitos, dolphins, and albacores, whose choice prey they seem to be, very few of those fishes being caught, without some of them being found in their stomachs. Nor does this fish find enemies only in it's own element; for several sea-birds watch, hovering for it's emerfion, and dart down on it with fuch rapidity, as to make it their prey, before it's replunge; fo that it fuffers a fatal perfecution in both elements.

THE dolphin, according to Sir Hans Sloane, is a very ftraight-bodied fish, and not that crooked animal he is ufually represented by painters. His head indeed is exactly the fame as it is drawn in pictures and on figns; but, being thickeft at the gills, his body grows gradually taperer quite down to the tail, from the extremity of which to the end of the nofe is commonly about four feet. He is a fish of prey, as we have juft now hinted, and fwims very fwiftly, in fomuch that we are told he keeps pace with the flying-fish, and often catches them juft as they drop into the water, after they have taken a long flight to efcape his jaws. In order to catch the dolphin, Mr. Smith fays they faften the feather-ends of two goofe quills to a hook, one on each fide; and this, being tied to a line, not much thicker than whip-cord, is drawn after the fhip's ftern when the wind does not blow too frefh, making a fmall rippling on the furface of the fea, like a flying-fish juft rifing out of the water, which deceives the dolphin, who feizes the hook and feathers, and is taken*.

* Mr. Moore agrees with Mr. Smith as to the ftraightnefs of the dolphin and likewise tells us they caught feveral of them by making an artificial flying-fish, and fkipping it to and fro very faft on the furface of the water, at the ftern of the veffel,

THE colours of the dolphin are extremely beautiful, his head being of the most lively azure blue, as is likewise his body from the back fin to the middle of each side, with some intermixture of green, and strewed with bright spots of gold, scarlet, &c. From hence quite down to his belly his skin is the colour of the fairest beaten gold, but (in our author's opinion) far surpassing it in beauty, and a sight worthy the attention of the greatest monarch. About three minutes after he is taken out of the water, his glorious colours grow faint and fading, and then presently return and vanish again as quick as thought itself. In short, says Mr. Smith, in five or six minutes time this gay surprising object fills a traveller's mind with more lofty notions of the great Creator's wisdom and magnificence bestowed upon the inferior part of the animal world, than ever it was capable of entertaining before. A mackarel just taken out of the sea is the most beautiful of English fishes, in our author's judgment; but alas! (says he) it's colours are infinitely short of those of the dolphin.

THERE is a stellar-fish of a very strange and singular form, of which Mr. Winthrop has given some account in the Philosophical Transactions, and which highly merits the attention of the curious. This fish spreads itself from a pentagonal root into five branches, each of which is divided into two; and these ten branches are subdivided into twenty, these again into forty, and so the subdivision continues till the little ramifications amount to 81,920; beyond which our author could not certainly trace the expansion, though possibly each of these small threads might, if examined whilst the fish was living, have been found to be farther subdivided. Its body resembles an echinus

or egg-fish, the main branches a star*, and the divisions of the branches, the plant mistletoe.—The fisherman who brought this fish to Mr. Winthrop told him, that he never saw or heard of any of the species, except six or seven he himself had taken at several times on the coast of New England, when he was fishing for cod. When first taken out of the water, it gathered itself round like a wicker-basket; and having fastened upon the bait on the hook, surrounding it with it's arms, it would not quit it's hold, though drawn into the vessel, till lying a while upon deck it began to feel the want of it's natural element, and then it voluntarily extended itself into a flat round form. The only use of all this curious structure seems to be to make a sort of purse-net for the animal to catch other fish, or whatever else is fit for it's food; and as a store-basket to keep some of it for a future supply; or as a receptacle to defend the young ones of the same kind from fish of prey, if not also to feed on them; which appears not improbable, as sometimes pieces of mackarel are found within the concavity, and sometimes a small fish of it's own species. Every one of the smallest parts of the fish had motion when it was alive, and a tenacious strength; but, after it was dead and expanded, it could scarcely be handled without breaking, though by carefully laying it to dry it was somewhat hardened. Mr. Winthrop thinks it may be called a basket-fish, a net-fish, or a purse-net fish, till a fitter English name be found to distinguish it's species.

* This fish is the *stella arborescens* of Rondeletius, first described by him, and since by other naturalists.

THERE is another kind of star-fish which stretches out five long arms or claws, making five angles, and ending in so many points, resembling a star as it is usually painted. This fish moves in all directions indifferently, sometimes creeping, and sometimes swimming. It has several little trunks of a fleshy substance, through which it sucks it's food out of the mud ; and, towards the center of it's body, it has a mouth armed with teeth. As these creatures do not enjoy the benefit of sight, for discerning their prey in common with other animals, nature has therefore provided them with more instruments for feeling, sucking, and devouring their food ; for, when they have not an opportunity of exercising their teeth, they can go to work with their trunks in the mud and among the weeds, and by that means procure a tolerable repast. It is not yet discovered how the office of digestion is performed in the star-fish, or how it voids it's excrements, unless it be under a sort of roundish stone, which is found on it's back, and seems fastened to it with ligaments.

THE echinus, or sea-urchin, though not peculiar to the seas of America, deserves to be mentioned. There are several species of this shell-fish, but those are most properly called so which are covered with prickles resembling those of the land-urchin, or hedge-hog*. The mouth of this fish is placed on it's under part, touching the ground ; and is armed with five teeth, which meet at their extremities in a point, that they may all work together. The stomach and bowels fill the inside of the shell, which has several little holes

* A species of sea-urchin, otherwise called a globe-fish, has been already taken notice of in Vol. V. p. 282.

in it to give free liberty to the action of those ligaments that are to move the prickles, which serve the animal for a covering and defensive armour. The outward extremity of the prickle is sharp-pointed, but the other end next the shell is hollowed like a socket, and receives a little tubercle to which it is jointed. Several of these tubercles are seen on most of those shells that have no prickles on them; but what is most remarkable in some sea-urchins is a sort of bristles, which they thrust out or draw in at pleasure. They are like so many small tubes or reeds, and with these they suck and separate those juices which are their proper nourishment.

BUT, of all the shell-fish which either the American or any other seas afford, perhaps none are more to be admired than the nautilus or sailor, which Vallisneri has prettily described, and after him the ingenious author of *Spectacle de la Nature*. The turbinated shell of this fish, which is beautified with strong and lively colours, may properly be called a natural boat, since the little animal that inhabits it makes use of it in that capacity. In calm weather he mounts up in it to the surface of the water, unfurls a membrane to the wind, which serves him instead of a sail, and extends two arms, with which, like oars, he rows his little bark along. When he has a mind to dive, he strikes sail, collects himself within his shell, and, filling the remaining cavity with water, sinks to the bottom: for the fish, by contracting himself, leaves a vacant space in his boat, into which the water finds admittance through a little aperture, and by it's additional gravity causes it to subside. On the other hand, when the fish has an inclination to ascend to the top, it is probable he dilates himself, and so forces the water out of his boat, by which evacuation
it

it becomes specifically lighter than the water, and consequently rises to the surface. Thus the animal steers his course without chart or compass, self-taught in the art of navigation, and is at once both vessel and pilot. From whatever quarter the wind blows, it is all one to our little sailor, who is under no apprehension of danger, nor ever destitute of rudder or oars, pump or cordage, having within himself all the necessary utensils of navigation.

THE foldier-crab, or hermit, is a very remarkable kind of shell-fish, described by Rondeletius and other naturalists as living in a house not it's own, and owing it's security to the labour of another, though nature has provided it with a shell, and given it claws to defend and subsist itself, in an honest manner. It is the custom, it seems, of this fish to take possession of the first shell he finds empty, and sometimes several of them meet naked, and contend for the same habitation, in which case, he that has the strongest pincers carries the day. Here the conqueror takes up his lodging for some time, till, being grown too big for his house, he quits it, and seeks out for another of a convenient size, where he stays till he is tired of it, or is grown too bulky, and then he removes again. This is the account that naturalists give of this fish; but the French author lately mentioned does not think it deserves the character of a lazy animal that lives by the labour of others, as it is usually represented; for nature (says he) knows no such principle as idleness, nor ever acts without reason or wise design. The truth is, the body of this fish, called by the French the poor man or the hermit, is flabby, and covered with a thin shell insufficient for it's security; which obliges it to take shelter in some of those empty shells, which are of no use

but to such a tenant. This precaution of the hermit (adds our author) is not unlike that of the little crab, which, being sensible of the weakness of his own shell, begs house-room of the muscle, who, having some to spare, receives his guest, and they live very neighbourly together.—It is said the oil distilled from this fish is an excellent remedy for the rheumatism.

THE cuttle-fish, the calamary, and pourcontrel or polypus, seem to be different species of the same fish, and are found in the seas of Europe as well as those of America. The cuttle-fish is covered on the back with a white bony or testaceous substance, an inch thick in the middle, but thinner on the sides; on the upper part hard, smooth, and glabrous; on the lower fungous, softish, somewhat rough and friable. It has two large black eyes incircled with red, and, besides several claws, it has two long trunks or horns, which serve it in swimming, and to let down like a line for it's prey, the hook at the end of each laying hold of the small fish on which it feeds.—The calamary is provided with much the same instruments; and the pourcontrel or polypus has, besides it's eight claws, an excrescence that rises from it's back in the form of a pipe, which he inclines to the right or left to steer him as he swims along.—But what is most observable in these fishes is, that they are all provided with a bag under their throat, full of a liquor as black as ink, which either through fear or natural instinct they discharge when pursued by other fishes, and so by troubling the water have an opportunity of making their escape.—The bone, the black liquor, and the eggs of the cuttle-fish are of use in medicine. The bone dries and absterges, cures spots and freckles, is good for the eyes, removes swellings in the gums, gives relief in

in the asthma, stops a gonorrhœa, expels gravel, and promotes urine. The black humour is said to loosen the belly, and the eggs absterge the kidneys and ureters, and provoke urine and the menses.

HAVING mentioned a polypus (which word signifies many feet) it leads us to take notice of a very curious discovery made some years ago by M. Tremblay at the Hague; concerning which M. Reaumur read a memorial before the Royal Academy of Sciences at Paris in November 1742. The substance of it was, that an aquatic insect called a polypus was found to have this peculiarity in it, that, when cut into several parts, each of those parts produces, of itself, in the space of twenty-four hours, what it wants to compleat the whole; so that the part belonging to the head will produce a tail, and on the contrary. Nay, some of those insects have been cut transversely into forty parts, which each produced what was wanting in it to make a perfect insect; so that from one polypus proceeded forty. If they be cut down the middle from head to tail, each half will produce another.—On this occasion M. Reaumur made several learned and judicious observations, particularly that, as it is an axiom that nature is not singular in her productions, there must be other insects endued with the like wonderful property: and he reports, that by experiments he has already discovered the same in certain earth-worms, but that nature operates in them much more slowly*.

* Mr. Smith has inserted this account in one of his letters, and mentions a property of the lizard which had fallen under his own observation, viz. that, if one of them had half it's tail bit or cut off, it would soon grow again to it's usual length.

THE fishes we have been describing are such as are perpetually travelling from place to place, but there are several others of a quite contrary nature, which remain all their lives attached to one and the same situation; as the *auris marina*, or sea-ear, and the limpets of every species. It is wonderful indeed how these and many other shell-fish subsist without seeking out for provision, unless we suppose their prey comes to them of its own accord: and perhaps this is the case with some of them, particularly the sea-ear, where the little holes along the brims of the shell seem designed as so many traps to catch the small worms that are found at the bottom of the sea in great abundance.

AMONGST this kind of animals the sea-mushroom is one of the most remarkable, which never quits the place where it has once fixed its abode. These little creatures are found sticking on the sides of rocks, where they look like mushrooms when they are shut and collected within themselves, and like the anemone when they open and display all their trunks. There is no forcing them to open against their will, but upon pressing them they sometimes eject young ones of different sizes, which seems to prove that they are viviparous, and both male and female. You may loosen the sea-mushroom from its hold, carry it away, and keep it in water, where it will fasten itself again to the first convenient place it finds. When it has a mind to open, it raises itself, and thrusts out two white pellicles like bladders, round which appear a vast variety of points or trunks, of different sizes and colours, which has made some naturalists call it the sea anemone. This opening, not unlike the blowing of a flower, has inclined others to look upon it as a real plant, or else as partaking both of the animal and vegetable nature: But, as it

it is certain the little points or studs just mentioned are not leaves, but a sort of snouts or trunks designed for the sucking in of nourishment, like the fine reeds or prickles of the sea-urchin or star-fish, we cannot deny it a place in the animal kingdom, especially after such a circumstance as that of three or four young ones issuing from the parent upon squeezing it, which is confirmed by sufficient testimony.

THIS short account of some of the inhabitants of the ocean may serve as a specimen of that inexpressible wisdom which appears in the works of the creation, and of the various methods that God has provided for the support of different animals. And we cannot but admire (with the ingenious French writer whom we have chiefly followed on this subject) the kindness of Providence, in that profusion of riches which the sea pours in upon us, every time it rises and floods our coasts, viz. those vast quantities of lobsters, oysters, and all sorts of shell-fish it brings up along with it; from whence, after having fattened them either with it's own substance, or such nutritive particles of earth and air as are contained in it, it retires by a gentle decrease, giving man access to these dainties, and inviting him to come and gather it's favours, which it has so liberally scattered upon the shore, or left upon the rocks.

As the same author observes, we have just reason to be charmed with the lustre and beauty that appears in the coverings of the testaceous animals, though apparently they are nothing but a discharge of an excrementitious matter from the body that produces them. How delightful is that mixture of red, blue, and green colours that stain the silver ground of the shell of the naker or mother of pearl! but most amazing of all is that wise design and contrivance

which appears not only in the shell of this fish, but even in that of the common oyster or muscle. The greatest part of these animals are viviparous, and bring forth their young with the shell about them, which covering nature has provided them with for their security and defence, and has also made them to abound with a slime or viscous juice which they emit to the extremities of their shells, where it hardens into a substance of the same nature, and by that means enlarges their habitations proportionably to the growth of their bodies*. Hence

* Naturalists have been generally mistaken as to the manner of the formation of shells. The animal and it's shell have been always supposed to proceed from the same egg; but M. Reaumur has shewn the supposition to be false, having found by certain experiments, that the shells of garden snails are formed of a matter which perspires from their bodies, and hardens and condenses in the air. All animals are known to perspire, and are encompassed with a sort of cloud or atmosphere, which exhales from them, and probably assumes nearly their external figure. Snails have nothing peculiar in this respect, unless that the atmosphere of their perspiration hardens about them, and forms a visible covering, whereof the body is the mould or model, whereas that of other animals is evaporated and lost in air. This difference arises from the difference of the matter perspired; that of testaceous animals, particularly the snail, being viscous and stony.—On this principle, though the shell serves the animal as an universal bone, yet it does not grow like a bone, nor like any of the other parts, by vegetation, that is, by a juice circulating within itself; but by an external addition of parts laid one over another.—To consider the thing a little more particularly: It is to be remembered, that the snail's head is always at the aperture of the shell, and it's tail in the tip or point of the shell; and that it's body is naturally turned into a spiral form, the different circumvolutions whereof are in different planes. Suppose then the snail just hatched; as the matter it perspires petrifies round it, there must be formed a little cover proportioned to the size of it's body; and, as the body is yet too small to make a circumvolution of a spiral, at least a whole one, this cover will

Hence come those curve lines that we discern in the shells of divers fishes, one without another, which perhaps shew the number of their years, or at least the different stages of their growth. There is also a surprising deal of workmanship shewn in the formation of that hinge which joins the upper and lower shells of a muscle, and in the curious movements of those little muscular fibres and ligaments with which it is fastened. When the animal has a mind to shut itself close up within it's vaulted habitation, it discharges a certain liquor into those muscles, which causes them to dilate and swell, and consequently shortens their length, so that both the shells are thereby brought closer together. On the other hand, when it is disposed to open it's doors, at the return of a new tide, or the fall of some agreeable shower, it withdraws that liquor from them, whereby they are relaxed and lengthened. But these, our author acknowledges, are only probable conjectures, it being impossible for us to determine any thing certain of what is concealed from our observation at the bottom of the sea. However what we do see is sufficient to excite our wonder and astonishment at the constant regularity of nature in providing for the meanest creatures, and our

will only be the center, or at most the beginning of a little spiral curve. Now as the animal grows, if it ceased to perspire, it is evident all that is added to it's body would remain naked; but, as the perspiration continues, the cover increases in proportion to it's growth. Thus an intire circumvolution of a spiral is formed, and so a second and a third; and still every new spire is bigger than the last, in regard the animal grows in thickness, at the same time it grows in length. When it ceases to grow, it does not cease to perspire; and accordingly the shell increases in thickness, though not in length.

gratitude to the great Author of nature for those innumerable benefits he so liberally bestows upon us.

BUILDINGS and ANTIQUITIES.

AS we have heretofore endeavoured to give the reader some idea of the grandeur of the Peruvian monarchs before the Spaniards conquered their country, so it shall be the business of this article to consider the present and ancient state of the city of Mexico, now an archbishop's see and the seat of a Spanish viceroy, and formerly the capital of a great and opulent empire.

THIS famous city stands in the lake of its own name, on the east side of a valley, at the foot of a ridge of hills, and is only to be approached by five causeys, but has neither gates, walls, nor artillery. It is one of the most regularly built cities in the world, the streets being straight and crossing each other at right angles, and in the narrowest of them three coaches may go abreast. It is almost quadrangular, being more than five miles one way, and little less than four the other, according to some writers; but a Spanish author of credit, who lived there long enough to know it, says it is not much above six miles in compass, and that it contains about a hundred thousand inhabitants, many of them immensely rich; the most valuable commodities of the East and West Indies, as well as of Europe, being daily exposed to sale in their market-place, which is a spacious square in the middle of the city. The houses are built of brick and stone, but not very high, the country being subject to earthquakes; and, as all buildings are very convenient, so some of them are very magnificent, especially the cathedral, which
was

was a work of sixty years, and is embellished with the finest painting, gilding, carving, and other ornaments. This structure, with the cloysters and dwellings of the clergy adjoining to it, takes up a large space of ground; and the revenues belonging to it are equal to the beauty and magnificence of the buildings. The high altar is said to have cost fifty thousand pieces of eight, each piece about four shillings and sixpence English; and the chalice for the ordinary service eleven thousand, being of gold enchased and set round with rubies. There is also an image of the virgin Mary, which is of massy silver, adorned with rubies and pearls, to the value of thirty thousand pieces of eight, and which is carried in procession once a year, when a certain number of maids draw lots for three hundred pieces of eight for their portions.—Besides the cathedral there are about thirty other fine churches, twenty-two convents of both sexes, and several hospitals richly endowed. The revenue of the cathedral is at least seventy thousand pounds per annum, of which the archbishop has fifteen thousand, besides a great many fines and other perquisites.

THE great square or market-place already mentioned has a piazza on one side of it, under which are some of the richest shops in the world; and on the opposite side stands the magnificent palace of the viceroy, which was new-built in the year 1698, and whose principal front is not inferior to that of the palace at Naples, which it resembles, particularly in its noble stair-case, leading to a great number of beautiful apartments: and yet the archbishop's palace, which is built round like a theatre, is reckoned a more stately and elegant structure than that of the viceroy.

NEXT

NEXT to this great square is a street called the Plateria, inhabited by goldsmiths and silversmiths, whose shops are furnished with such a variety of utensils and ornaments of gold, silver, and jewels, as perhaps cannot be paralleled in any other city in the world: for here even the Negro women that walk by the ladies coaches wear bracelets of gold, pearl necklaces, and jewels in their ears; and the black foot boys are dressed in rich liveries, adorned with gold and silver lace. Here they are continually making either church or family plate, especially when the merchants are bespeaking goods against the arrival of the galleons; at which time the shops and warehouses are filled with chests of plate designed for Old Spain, piled up to the very cielings. The glasses or safes, like those of our goldsmiths, are full of gilt plate, and their cabinets are filled with vast quantities of rings, pearls, large jewels, numberless toys, especially gold snuff-boxes enamelled and set with rubies and emeralds, of which it is said ten thousand are sometimes to be seen in this street, and hardly a fleet departs for Old Spain without carrying off at least five hundred.—The street where the mercers expose their silks has a very grand appearance; and that where the tradesmen reside who deal in brass, steel, and iron ware, is very long and spacious: but the street inhabited by the nobility, gentry, and lawyers, without any shops intermixed, exceeds all the rest for stately buildings, the principal whereof is the fine palace of the marquis del Valle, the successor of Cortez who conquered Mexico, which stands on the ground where the palace of the emperor Montezuma stood, and is deservedly admired for its structure and dimensions.

THERE

THERE is in Mexico a pleasant ring or park, planted with trees, and adorned with fountains and water-works, whither the quality of both sexes, and the gay part of the town, resort every evening. Several hundreds of coaches are frequently seen here, most of them with fine equipages and a great number of pages and other servants, of whom the former are generally Negroes. The ladies are said to be great gamesters; but the chief diversion for people of all ranks is in canoes upon a fine canal, the banks whereof are furnished with a vast variety of dainties for their accommodation. Others divert themselves with fishing in boats upon the lake, carrying along with them wine and cold provisions. The neighbourhood of the city is rendered extremely pleasant by the many villages, monasteries, palaces, country-seats, &c. which either stand on islands, or on the banks of the lake. Their best water is brought to town by an aqueduct from a mountain several miles distant.

NEAR the beginning of this aqueduct is Chapultepec, the burial-place of the Spanish viceroys, as it was formerly of the Mexican emperors. Here is a sumptuous palace, with fine gardens and water-works, and a beautiful chapel, the ornaments whereof are reckoned to have cost above a million of crowns.

As to Indian antiquities about Mexico, the Spaniards have destroyed the greatest part of them, but about seven leagues from the city there still remain two remarkable pieces, viz. the pyramids of the sun and moon, the founders of which are not known. They appear cut out in steps like those of Egypt; and on the top of them formerly stood two images of a monstrous size, representing the sun and moon, which the Indians worshipped. The pyramid of the sun stands about two hundred

hundred paces from the other, and is about a fourth part higher.

HAVING given a description of modern Mexico, we now come to treat of the ancient city, which, as it stood on the same ground the present city stands on, there is reason to believe was square, or pretty near that figure; and it's dimensions may be guessed at from the number of families residing in it, which the histories of that conquest make to be about sixty thousand. As at present, there was a vast square in the middle of the city, which, at the time of their great fair, was resorted to by at least a hundred thousand people, and contained a great number of booths and tents wherein they lodged their merchandise. The city was divided into two parts; the one inhabited by the court, the nobility, and persons of distinction; the other by tradesmen and people of inferior rank. The former part was much the largest, where the streets were spacious, the houses of white hewn stone, one story high, and they had flat roofs, adorned with battlements. Their cieling was of cedar, cypress, or other odoriferous wood; and their hangings either of furs and beautiful feathers, or cotton linen, painted with a variety of figures of plants and animals: but, notwithstanding their wealth, none of the nobility were served in plate, which was the prerogative only of the emperor.

THE palace of Montezuma, the last emperor, was so very large, that it had thirty gates, which opened into as many different streets, the principal front making one side of the great square above-mentioned. The materials of this building were polished jasper, black, red, and white; and over each gate were the arms of Montezuma, being a griffin with the wings extended, and a tyger in his talons. The whole consisted of several square courts,
and

and was so vastly extensive as to contain apartments for three thousand of the emperor's women, and a proportionable number of other domestics. — Another palace assigned to Cortez and his army was likewise of a surprising extent, containing commodious rooms and apartments for his five hundred Spaniards, and six thousand Indians his auxiliaries; and, when the Spanish general had planted his artillery, and placed his guards, it had much the appearance of a fortress, being surrounded with a thick stone wall, and flanked with towers.

WHEN Cortez and his army first entered the streets of Mexico, they were met by two hundred noblemen of the emperor's household, cloathed in one livery, with large plumes of feathers on their heads, all of the same fashion and colour. These, after meeting and paying their compliments to the Spanish general, fell back, and then dividing themselves made a lane for the Spaniards. Then came another body of the nobility of a superior dignity, who made a more splendid appearance; and in the midst of them was the emperor Montezuma, carried in a chair of beaten gold, on the shoulders of his favourite courtiers, whilst four of them sustained a canopy over his head. The whole was adorned with beautiful feathers, through which the glittering gold appeared; and the emperor was preceded by three officers with rods of gold, the harbingers of his approach, on whose appearance the people fell upon their faces, not daring to look upon their monarch. Cortez dismounting when the Mexican emperor drew near, the latter alighted from his chair, and carpets were spread in the streets for him to tread on. He advanced, it is said, with a solemn slow pace, leaning on the arms of two princes his relations, and was met by Cortez with a becoming haste and a most profound reverence;

reverence; which the emperor answered by touching the ground with his hand, and afterwards raising it to his lips; which was looked upon as a great condescension, and added to the esteem and veneration his subjects already had for the Spaniards. The conference between the Mexican emperor and Cortez was short at this interview, after which Montezuma commanded one of his princes to conduct the general to the palace appointed for his residence, and then returned to his own. The spacious apartments of this palace have been taken notice of above.

BESIDES the two palaces already mentioned, Montezuma had several pleasure-houses in and about the city; in one of which were great galleries, supported by pillars of jasper, and in them were kept all sorts of land-fowl and birds that Mexico produced. The sea-fowl were preserved in reservoirs of salt water; and those that were bred up in lakes and rivers, in others of fresh water. And so numerous were these fowl, that it is said to have been the business of three hundred men to look after them. In another square of the palace were kept all manner of wild beasts in their respective dens or cages, in a most regular order. In another square of the same palace were apartments for dwarfs and monsters, fools and naturals, of the human species, kept for the diversion or service of the court. Here were also armouries, well replenished with all sorts of Indian weapons; and the artificers that formed and cleaned these arms, had apartments in the same quarter.

ALL these palaces of the Mexican emperors had spacious and elegant gardens, laid out in fine shady walks, beds of fragrant and medicinal herbs, and parterres of beautiful flowers, and magnificent summer-houses, bagnio's, arbours, and fountains.

But

But there was a building in the most solitary part of the gardens, which surprized the Spaniards more than any thing they met with, and it was called the House of Sorrow, because the emperor used to retire thither on the death of his relations, or on any calamity, public or private. The roof, the cieling, and the sides were black, and only just so much light was admitted as to discover the dismal obscurity. In this gloomy mansion, the Spanish authors, pretend Montezuma used to converse familiarly with the prince of darkness.

THE principal of the Mexican temples was dedicated to Viztlipuzli, the god of war. The whole edifice formed a large square, and was encompassed by a wall of hewn stone, and adorned on the outside with knots of twisted serpents. At a little distance from the chief gate was a place of worship, built of stone, having an ascent of thirty steps, which led to a long flat roof, and the front of it (as the Spaniards relate) was decorated with the skulls of men who had been sacrificed to their idols. On each side of the square was a magnificent gate, and over every one of them four statues, supposed to represent some subordinate deities. At the foot of the wall within were the apartments of the priests, and of their inferior officers and servants; and yet there was room enough left for eight or ten thousand persons to dance on their solemn festivals. In the middle of the square was a structure of a pyramidical form, three sides whereof were smooth, and the fourth ascended by a hundred and twenty steps. There was a flat on the top, forty feet square, laid with jasper of different colours. This flat was surrounded with twisted rails, and on each side was a marble statue, supporting a vast candlestick, between which was a green stone, five spans high from

from the ground, which terminated in a point; and on this, it is said, they extended the human victims they sacrificed, throwing them on their backs, and ripping them open with sharp flints instead of knives; after which they tore out their hearts, and offered them to their idols. On the farther side, opposite to the stairs, stood a chapel of exquisite materials and architecture, where an idol was placed above an altar. This image was of human form, and set on a throne, sustained by an azure globe, which they called heaven; and from the sides of it issued four rods, whose ends resembled the heads of serpents. On the head of the image was a helmet, adorned with plumes of various colours; and its countenance was severe and terrible. In the right-hand it held a twining serpent, which served for a staff; and in the left-hand four arrows, which were revered as the gift of Heaven. It likewise bore a shield, adorned with fine white plumes in form of a cross.—On the left-hand was another chapel, in which was the image of Tlalock, another of the Mexican deities, almost in every respect resembling the former. These two idols were so intimately united, in the opinion of the poor Indians, that they ascribed to them the same attributes, and paid them the same honours. The walls and altars of these chapels were immensely rich, covered with jewels and precious stones, set on feathers of various colours. There were eight of these temples in Mexico, of the like architecture and equal wealth; besides two thousand small ones, dedicated to so many different gods, every street having its tutelar deity, every distress or calamity its particular altar.

On an island in the lake, about two leagues from Mexico, was situated Iztacpalapa, the two cities having a communication by a spacious stone causeway.

caufey. This town confifted of ten thousand houfes, many of which were built like thofe of Mexico. The rooms of the Cacique's palace were hung with cotton-linen finely painted; and among the curiofities in his garden he had a fquare refervoir, with ftairs to go down to the bottom, each fide four hundred paces.—Another city, called Cholula, was for beauty like Valladolid in Spain, containing twenty thousand fouls, and having fuburbs of equal dimenfions.—The city of Tlafcala was alfo built with ftone and brick, like the houfes of Mexico; and was fituated on four eminences, which were united and defended by a ftone-wall: fo well were the Mexicans fkill'd in architecture in thofe days, though now there are not any towns in the country built of brick or ftone, except thofe in poffeffion of the Spaniards.

Of the People, and particularly the Indians of NORTH AMERICA.

MEXICO, with which we fhall begin, is inhabited by a mixed people, confifting of Spaniards, Negroes, native Indians, Creoles, Mestizos, and various other mixtures. The whites are either born in Spain, or Creoles: the native Spaniards moftly enjoy places of honour and profit, and are concerned in trade. Thefe refemble the Spaniards of Europe, and have the fame gravity of behaviour, the fame natural fagacity, but a ftill greater fhare of pride and ftatelinefs; for they here confider their being born in Spain as a fingular honour, and are therefore, in return, looked upon by the Creoles with envy and hatred. The latter, indeed, are deftitute of that firmnefs and patience which diftinguifh the native

native Spaniards. They are weak, effeminate, and destitute of courage; for, living in an enervating heat, and spending their time in loitering and inactive pleasures, they have nothing bold and manly to enable them to make a figure in active life; and few have any taste for the satisfaction of a learned retirement. They are luxurious without elegance, fond of show and parade, temperate in eating and drinking, and employ themselves in amours and intrigues. The ladies are said to be little celebrated for their chastity or domestic virtues, but exert all their genius and abilities in combating the restraints that are laid upon them.

ALL the public employments in Mexico are held by native Spaniards; but they hold them only for a limited time, which must not exceed three years. Jealousy and avarice have an influence on all public regulations; and every officer, from the highest to the lowest, is said to have the avidity, which a new and lucrative post of short duration inspires. There are some troops kept in Mexico, and a good revenue appropriated for their maintenance, and the support of their fortifications; but the latter are neglected, and the soldiers are few, ill clothed, ill paid, and worse disciplined.

THIS is the character given of the Spaniards of Mexico by authors of reputation; but we hope there are many exceptions; and, indeed, it is not unlikely, that the ill behaviour of the majority may have caused these general reflections upon all.

WITH respect to the original Mexicans, they, like the other Americans, are generally tall, well proportioned, active, nimble, and remarkably swift of foot. Their complexion is a deep olive; their eyes large, lively, and sparkling; the face round, and usually with agreeable features. Some of them wear their hair flowing loose, others cut short, and

and others twisted and plaited on the head. Indeed, some nations, within the limits of this vast country, differ greatly in their manners and general appearance: a few deem flat noses the greatest ornament, and therefore early flatten those of their infants. Many of them disfigure themselves with paint, representing on their bodies the awkward figures of various birds and beasts; or, in time of war, paint their faces red, to give them a warlike and bloody appearance; they likewise anoint their bodies with oil or fat, to render their joints supple and pliant, and prevent their being bit by muscatoes. The people are, however, in general cloathed, though in a different manner from the Spaniards. They wear pendants, bracelets, and necklaces. The men have a thin plate of gold or silver, of an oval figure, and in the form of a crescent, hanging over their upper lip. The women, instead of this plate, wear a ring, which goes through the bridle of the nose. These they have of various sizes, but lay aside the larger sort at their entertainments; and the smaller do not hinder their eating. Their great men wear two gold plates, of the shape of a heart, a span long at each ear, fastened to it by a gold ring, which stretches the ear to an immoderate size. They likewise wear a kind of coronet or bandage of gold or silver, about the head, eight or ten inches broad, and indented on the upper side; while others have only a bandage of cane, painted red, and stuck round with beautiful feathers standing upright; besides, most of the Indians of both sexes have strings of shells, beads, and other toys, hanging from the neck down to the breast. Those Indians who live in the Spanish towns wear a short waistcoat, wide breeches, and a short cloke, resembling the Spanish dress; but their legs are bare,

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and only a few of them cover their feet with sandals. The women have a short jacket of linen or cotton, over which flows a loose robe. But there are such varieties in dress, depending upon custom and fancy, that it would be endless to enter upon the particulars.

THE Mexicans seem to be greatly degenerated, since they were conquered by the Spaniards, both in their genius, temper, and manners. They were once ingenious, hospitable, civilised, and generous, except in the article of human sacrifices; but now those who live among the Spaniards are said to be stupid, cowardly, and treacherous. The buildings, images, paintings, carvings, cotton cloths, manufactured feathers formed into beautiful pictures, and several other pieces of art, shew the genius of the ancient Mexicans; and the loss of these is a proof of the decline of their genius. But to what purpose should an Indian labour to improve talents that could only serve to render his bondage more irksome?

THE Indians who have preserved their freedom in the mountains and some other parts of the country, are still a brave, generous, and humane people, unacquainted with the sordid vices and corrupt manners of the inhabitants of the Spanish cities and towns. They spend their time in hunting, fishing, and field exercises; cultivate but little soil, sow and plant what is just sufficient to answer the purposes of nature, and allow nothing for the gratification of appetites founded on luxury. The business of planting is performed by the women, after the men have cleared the ground. The females also execute all the domestic offices; spin, weave, and make cotton and linen cloth for their own or their husbands apparel; and they are represented

presented as being obedient and respectful to their husbands, who return a mutual affection.

THESE free Indians dwell in thatched huts, and observe little regularity in their towns; their houses neither standing contiguous, nor in the least order, but are dispersed here and there; only they have one common fort or guard-house, seated on an eminence, where they hold their councils, and to which they resort on the approach of an enemy. They set up small posts, seven or eight feet high, and two or three asunder, closing up the intervals with clay. The roof resembles that of a barn, covered with palmetto leaves. The building is about twenty-four feet in length, and twelve in breadth: the hearth is in the middle, and they have only a hole over it, to let out the smoke: as they have no partitions, the whole house forms but one room. Instead of beds they use hammocks, which are hung from the principal beam; and their only seats and tables are blocks of wood. Their other furniture consists of earthen vessels, with large calabashes to hold their liquor; and their arms, as lances, darts, bows, arrows, and quivers, which, with their tools, are hung as ornaments round the room. Their guard-house is about a hundred and thirty feet long, and twenty-five broad. The walls are nine or ten feet high, and the ridge of the roof about twenty feet in height, and thatched with palmetto leaves. On the sides are narrow loop-holes, from whence they can repulse an enemy with their arrows; and the ground is, for a good space round, cleared of woods and shrubs, that an enemy may find no shelter from their arrows, or any place of concealment. They are defended by strong doors; but the Spaniards easily burn these structures, by shooting flaming arrows into the palmetto leaves which serve for thatch.

THEIR principal food is either Indian corn parched, ground into flour, and made into thin cakes, or fruit, roots, deer, wild hogs, &c. and sometimes fish. They frequently hunt in companies, a week or a fortnight together, every man carrying with him a hatchet, a bow and arrows, and a long knife, with a dog or two, to beat for game. Some women likewise go with them, to carry their provisions of roasted plantains, parched Indian corn, potatoes, yams, and a few utensils. They lodge at night wherever they happen to be at sun-set, contriving to be, at that time, near some river. They hang their hammocks between the trees, and have scarce any other covering but a plantain leaf, and the next morning, at sun-rising, begin their hunting. Their game, which chiefly consists of a sort of small wild hogs, are not swift of foot, and usually go in droves of two or three hundred; but they do not always find them, and sometimes hunt a whole day without success. When the beast is wounded or tired with the pursuit, he will stand at bay with the dogs, till the master comes up and shoots him; he then embowels the animal, and carries him to a place where the women are appointed to wait. They cut off it's head, flay, and quarter it; what they intend to preserve they barbecue, by laying it upon a wooden grate, under which is a fire of wood coals, which is kept up till the meat is well dried; and these pieces will keep a long time. When they have much game, the men assist the women in carrying it home; and, when their stock of provisions is almost spent, they go out again in search for more.

WHETHER their flesh be fresh killed or dried, they cut it into small pieces, and, putting them into a kind of pipkin, add green plantains or
other

other fruit, and some roots, with a great deal of pepper, stewing them seven or eight hours together in water, without suffering them to boil, which reduces the whole into a kind of pulp; then, pouring it into an earthen dish or calabash, set it on a wooden block, and eat, sitting round it on lesser blocks, each having a calabash of water by his side, to cool their fingers while they are eating. They have seldom more than one set meal in a day, but eat plantains and other fruit, either raw or roasted, almost all day long. They have a great variety of liquors, but their ordinary drink is water, with the flour of Indian corn infused in it, and drank off immediately. Their other liquors are made of different fruits, particularly plantains and pine apples; and to their juice, mixed with water, they sometimes add honey.

THEIR principal exercises, or rather employments, being hunting, shooting, and fishing, every man brings up his son to them, and they are said to be so expert, when children, that we are told a boy, of eight or ten years of age, will split a cane set up at twenty yards distance, with an arrow discharged from his bow, and kill a bird flying. But the most expert of the Mexicans are the Mosquito Indians, who live in the province of Honduras. These are tall, well-made, strong, and nimble, long-visaged, and have a stern look, and black lank hair. These inhabit the sea-shore and the banks of rivers, and are so expert as to turn aside any missile weapons thrown at them, with a small cane no bigger than a gun-stick. Their principal employment is striking fish, particularly the manatee and turtle; whence the English privateers, when they cruise on the Mexican coast, have usually one or two of these Mosquito Indians on board, to strike fish; and they will

take enough to maintain a ship's crew of a hundred men. When they serve the English, they learn the use of the gun, and soon become excellent marksmen; they behave with great bravery in an engagement, and never give back, while supported by the party that entertains them.

WE shall now proceed to the Indians of Florida, who are also of an olive complexion, and have robust bodies, finely proportioned; but both sexes have no other cloaths but a deer skin fastened round their waist. They stain their skin with the juice of plants, and have long black hair, which they twist and bind upon the head, so as to render it very becoming. The women, who are well-shaped and handsome, are so active as to climb, with surprising swiftness, to the tops of the highest trees, and swim across broad rivers, with their children on their backs. The men make use of bows and arrows, which they manage with great dexterity; the strings of their bows are made of the sinews of stags, and their arrows pointed with sharp stones, or the teeth of fishes.

THEIR management, with respect to their corn, which is accounted the common stock of the public, is worthy of notice. The crop, which is calculated to serve only half the year, is collected into granaries appointed for that purpose; and afterwards distributed to every family, in proportion to the number of persons it contains. The soil is indeed capable of producing much more corn than they are able to consume, but they chuse to sow no more than will serve them six months, retiring, for the rest of the year, into the deep recesses of the forests, where they build huts of palm-trees, and live upon roots, wild fowl, and fish. They are also fond of the flesh of alligators, the young of which are said to be delicious eating, but have a strong musky smell. They dress their meat, in
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the smoke, upon a wooden gridiron, and their common drink is water. With respect to their religion, they worship the Sun and Moon, and have an extreme aversion to all Christians; which is the less to be wondered at, as the horrid cruelties, exercised by the Spaniards on the natives of the adjacent island of Cuba and other places, could not fail of exciting their abhorrence. The people are, in general, satisfied with one wife; but the chiefs are indulged with more, though the children of only one of them succeed to the father's dignity.

THE government of the Floridans is in the hands of many chiefs, who are called *cassiques*, and are generally at war with each other; but this is far from being carried on in an open manner; on the contrary they usually make use of surprise or stratagem, exercising great cruelty upon the men they take prisoners, yet sparing the women and children, whom they carry off, and settle among them. On their obtaining a victory, they, at their return home, assemble all their friends, and feast three days and nights, spending their time in singing and dancing.

AMONG the various Indian nations and tribes within the vast extent of the country on the back of the English settlements, those, termed the Five Nations, deserve particular notice, they being dreaded and revered by all the others, for their superior understanding, activity, and valour in war, in which, constant practice has rendered them expert, they being generally at war with one nation or other, and sometimes with several at a time. Their manners, customs, and modes of dress, are, as near as possible, adopted by many of the other tribes; and those Indians are generally esteemed by the other nations the politest and best bred, who the

nearest resemble them. They claim the whole of the country that lies to the south of the river St. Lawrence, as far as the Ohio, and down that river to the Wabach, from the mouth of the Wabach to the bounds of Virginia: on the westward they formerly extended to the lakes of Ontario and Erie; and their eastern boundaries were the lake Champlain and the British colonies. When the English first settled in America, they were able to raise fifteen thousand fighting men; but are at present so reduced by the wars they have maintained with the other Indians, and with the French in Canada, that they at present amount to no more than between three and four thousand.

THE Mohocks were once the most numerous tribe among them, though they are now the smallest; they however still preserve a superiority over the rest, and are consulted and appealed to, in great emergencies, by all the others. About a hundred years ago, they destroyed the greatest part of the Hurons, who then lived on the south side of the lake Ontario, and the remainder now live, by permission of the Five Nations, at the west end of lake Erie. They subdued several other nations, and obliged some to change their habitations, while others, as a badge of subjection, are not allowed to appear painted at any general meeting or congress, where the Five Nations attend. They have been inveterate enemies to the French, from the time of their first settling in Canada, till it's being conquered by the English; and are almost the only Indians, within many hundred miles, that have been proof against their solicitations to turn against us. They once burnt great part of the city of Montreal, and now maintain a constant war with the Cherokees, Chickesaws, and Creeks, against whom many of their young men are annually

ally sent, and are said to have sometimes carried their hostilities as far south as the isthmus of Darien.

THEY are far from being deficient in good sense and ingenuity : they have strong imaginations, and their memories are so retentive, that, when they have been once at a place, let it be ever so distant or obscure, they will readily find it again : even in dark cloudy weather, they direct their course with great exactness, by observing the bark and boughs of trees ; the north side in Canada being always mossy, and the boughs on the other side the largest. They are grave in deportment upon serious occasions ; observant of those in company ; respectful to the old ; of a temper cool and deliberate ; by which they are never in haste to speak before they have well thought upon the matter, and are sure the person who spoke before them has finished all he had to say. They have therefore the greatest contempt for the Europeans, who interrupt each other, and frequently speak all together. Nothing is more edifying than their behaviour in their public councils and assemblies. Every man there is heard in his turn, according as his years, his wisdom, or his services to his country, have ranked him. Not a word, not a whisper, nor a murmur, is heard from the rest, while he speaks ; no indecent commendations, no ill-timed applause. The younger sort attend for their instruction. Here they learn the history of their nation ; here they are inflamed with the songs of those who celebrate the warlike actions of their ancestors ; and here they are taught what are the interests of their country, and how to pursue them.

THERE is no people amongst whom the laws of hospitality are more sacred, or executed with more generosity and good-will. Their houses, their provisions, even their young women, are not

enough to oblige a guest. To those of their own nation they are likewise very humane and beneficent. If any one of them succeed ill in his hunting, or has his house burnt, he feels no other effect of his misfortune, than that it gives him an opportunity of experiencing the benevolence and regard of his fellow-citizens, who for that purpose have all things almost in common. But to the enemies of his country, or to those who have privately offended him, the American is implacable. He never, indeed, makes use of curses or indecent expressions; but conceals his sentiments, and appears reconciled, till by some treachery or surprise he has an opportunity of executing an horrible revenge. No length of time is sufficient to allay his resentment; no distance of place great enough to protect the object; he crosses the steepest mountains, he pierces the most impracticable forests, and traverses the most hideous bogs and deserts for several hundreds of miles, bearing the inclemency of the seasons, the fatigue of the expedition, the extremes of hunger and thirst, with patience and cheerfulness, in hopes of surprising his enemy, on whom he exercises the most shocking barbarities. To such extremes do the Indians push their friendship or their enmity; and such, in general indeed is the character of all strong and uncultivated minds. The Indians, however, esteem nothing so unworthy of a man of sense as a peevish temper, and a proneness to sudden and rash anger; which has such an effect, that quarrels seldom happen among them, when they are not intoxicated with liquor. Yet they are extremely sensible of the pleasures of friendship; for each of them, at a certain age, makes choice of one nearly of the same standing in life, to be his most intimate and bosom friend; these two enter into mutual engagements,
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by which they oblige themselves to brave any danger, and run any risque, to assist and support each other. This attachment is carried to such a length, as to conquer their fear of death, which they consider only as a temporary separation; for they are persuaded that they shall meet and be reunited in friendship in the other world, where they shall need each other's assistance, as well as here.

ALL the Indian nations appear to have some sense of a Deity, and a kind of religion; but this is so various, so perplexed and confused, that it is difficult to give an account of it. Their ideas of the nature and attributes of God are very obscure, and some of them absurd; but they all acknowledge him to be the creator of the world; but, how it was created, they know not, and have various conjectures about it, some imagining that men were first rained down from the clouds, and that the animals descended with them. They seem to have some idea that there are spirits of a higher and more excellent nature than man, and, supposing them every-where present, they frequently invoke them, and endeavour to act agreeably to their desires. They likewise imagine that there is an evil spirit, who they say is always inclined to mischief; and as they are persuaded that he has great power, he is a principal object of their devotions; for they generally address him most heartily, beseeching him to do them no harm: but, supposing the other to be propitious, and always inclined to do them good, they intreat him to bestow blessings upon them, and prevent the evil spirit from hurting them. In order to procure the protection of the good spirit, they imagine it necessary to distinguish themselves by becoming exact marksmen, expert hunters, and good warriors.

THEY have great dependence on their dreams, believing that, from the dreams of youth, may be collected the history of their future life. Hence, when they arrive at a certain age, dreaming is made a kind of religious ceremony, which is thus performed: they besmear their faces all over with black paint, and fast for several days, in which time they expect the propitious spirit will appear to them, in some form or other, while they sleep. In favour of some constitutions, they sometimes limit the fast to a shorter time than is generally judged necessary; however, the propitious spirit, being constantly the subject of the person's waking thoughts, becomes also the subject of his dreams; at least every phantom of their sleep is regarded as a figure of him, whether it be bird, beast, fish, tree, or any thing else; which is particularly respected by them all their lives after. Their priests frequently persuade the people, that they have revelations of future events, and are authorised to command them to pursue such and such measures; they likewise interpret all the people's dreams, and unfold the mysteries of religion. The other world they represent as a place abounding with an inexhaustible plenty of every thing desirable, where they shall enjoy the full gratification of all their senses. This is, doubtless, the motive that induces the Indians to meet death with the utmost indifference and composure; none of them being in the least dismayed at the news that they have but a few hours or minutes to live. Thus a father calmly leaves his dying advice to his children, and takes a formal leave of all his friends.

POLYGAMY is practised by some nations, but in most they are contented with one wife; and it is said that no nation of the North-American Indians is without a regular marriage, in which are many ceremonies,

Ceremonies, the principal of which is said to be the bride's presenting the bridegroom a plate of corn. Though the women are incontinent before wedlock, they are remarkably chaste after marriage. The punishment both of the adulterer and the adulteress is in the hands of the husband himself, and is often severe, from it's being inflicted by one who is both the injured party and the judge. Their marriages are not very fruitful, they seldom producing above three or four children, which are brought forth with much less pain than the European women suffer upon the like occasion, and are immediately followed with little diminution of their usual strength. The mothers are so fond of their children, that they seldom wean them till they are upwards of two years old, and carry them on their backs, till the burthen becomes quite insupportable. As soon as they can walk, they go when and where they please; but their parents carefully instruct them very early in the use of arms, and frequently relate to them the great achievements of their ancestors, in order to inspire them with bravery. They introduce them very early into the public councils, and make them acquainted with the most important affairs and transactions: this accustoms them to secrecy, gives them a composed and manly air, inspires them with emulation, and makes them bold and enterprising. They seldom chastise their children, for, when they are young, they say they are not sufficiently endowed with reason; for, if they were, they would not do wrong: when they are more advanced in life, they do not then chastise them, because, being capable of judging, they ought to be masters of their own actions, and not to be accountable to any one. In the same manner, they excuse any ill treatment they receive from a person in liquor: Should we

blame or punish him, say they, when, being void of reason, he knows not what he does?

THE men are remarkable for their indolence, on which they seem to pride themselves, pretending that labour would degrade them, it belonging solely to the women, while they are formed only for war, hunting, and fishing. They, however, make their arms and fishing-lines, form their canoes, and build and repair their houses; though they frequently oblige the women to assist them, even in those employments, besides their attending all domestic affairs.

LIBERTY, in it's fullest extent, is their darling privilege, it being the great and fundamental principle of their policy, that every man is equally free and independent, and that nothing can be a compensation for the loss of liberty. Avarice is unknown to them, and they are neither prompted by ambition, nor actuated by a love of gold; for the distinctions of rich and poor, high and low, do not so far take place among them, as to create the least uneasiness, or excite the resentment of any individual; hence the brave and deserving, in whatever circumstances, are sure to be esteemed. Their feasts, whether at a triumph, a visit, or a funeral, are very simple. The Indian, instead of endeavouring to make a splendid appearance, gives his friends a hearty welcome, and does not value spending the fruit of a whole season's labour, to convince them that he is so. The guest is sure to be treated kindly, and that he shall not be the subject of ridicule, while present; nor of cruel remarks, when absent. On these occasions, a servile regard is never paid to the distinctions of rich and poor, so as to lessen the spirit and pleasure of conversation, when the company happens to be formed of a mixture of both. When any business of consequence is transacted, they

they appoint a feast upon the occasion, of which almost the whole nation partakes : but upon matters of less general concern, are lesser feasts, to which none are invited, but those engaged in that particular business. Before the entertainment is ready, the principal person begins a song; on the remarkable events of their history, and whatever may tend to their honour or instruction. The others sing in their turn. They have also dances, chiefly of a martial kind ; and no business or solemnity is carried on, without songs and dances.

THE general in chief, who may be considered as their king, is usually chosen by the elders or heads of tribes ; and his election is also attended with singing and dancing ; but he is rather revered as a father than feared as a monarch ; for he has no guards, no officers of justice, and no prisons. The other forms of government may be considered as a kind of aristocracies, in which no other qualification is absolutely necessary for their chiefs, but age, with experience and ability in their affairs. However, there are generally in every tribe, some particular families, from whence they chuse their chiefs, unless they shew themselves unworthy of that rank ; indeed, there are some of the tribes themselves, who, on account their number or bravery, have a pre-eminence over the rest, which, not being exacted with pride, is never disputed, where due.

THE great council is composed of the heads of families, and such whose capacity has raised them to the same degree of consideration. These meet in a house built in each of their towns, where they receive ambassadors, deliver them an answer, sing their traditionary war songs, and commemorate the dead. Here they likewise propose all such affairs as relate to the state, which have been already

ready digested in the secret councils, at which none but the head men assist. The chiefs seldom speak much themselves at these general meetings, which are always public; but intrust their sentiments with a person called their speaker or orator, there being one of this profession in every tribe and town. Their manner of speaking is natural and easy, their words strong and expressive, their style bold, figurative, and laconic, nothing being said but what is necessary either to inform the judgment, or excite such passions as the subject naturally requires.

THE same council has likewise the charge of the peace and order of the community. Their suits are few, and soon decided; for they have neither property nor art sufficient to render them perplexed and tedious. When criminal affairs are so flagrant as to become a national concern, they are brought before the same jurisdiction: but, in ordinary cases, the crime is either revenged or compromised by the parties concerned. If a murder be committed, the family that has lost a relation prepares to kill the murderer, which is no sooner done, than the kindred of the last person slain think themselves as much injured, and as justifiable in taking revenge, as if the violence had not begun among themselves. But things are in general determined in a more amicable manner: the offender absents himself, and his friends send a compliment of condolence to those of the party murdered, offering them presents, which are seldom refused. Upon this occasion, the head of the family delivers the presents in a formal speech, one by one, sometimes to the number of sixty articles; saying, By this I remove the hatchet from the wound. By this I dry up the flowing blood. And thus in a figurative manner they take away, one by one, all the circumstances

cumstances and consequences of the murder. If the murder be committed by one of the same cabin, that cabin has the full right of judgment within itself, without appeal, either to put to death the guilty person, to pardon him, or to force him to give some recompence to the wife or children of the slain. Mean while the supreme authority of the nation looks on unconcerned.

As these people are of a vindictive disposition, they frequently take up arms on very trifling provocations. Their private quarrels are frequently decided this way, and expeditions undertaken without the knowledge or consent of a general council. These private expeditions are not only winked at, but excused as a means of keeping their young men in action, and inuring them to warlike exercises. But, when war becomes a national affair, it is entered upon with great deliberation. An assembly of the sachems and chief warriors is first called to deliberate upon the affair. In this general congress among the northern Indians and the Five Nations, the women have a voice as well as the men. When they are assembled, the chief sachem or president, taking up the tomahawk, which lies by him, says, "Who among you will go and fight against such a nation? Who among you will bring captives from thence, to supply the place of our deceased friends, that our wrongs may be revenged, and our name and honour be maintained as long as the rivers flow, grass grows, or the sun and moon shall endure?" Then one of the principal warriors rising harangues the whole assembly, and, at length addressing himself to the young men, asks who among them will go with him to fight their enemies? On which they generally rise, one after another, and fall in behind him, while he walks round the circle, till he

he is joined by a sufficient number. On these occasions they have usually a deer, or some other beast, roasted whole; and, after the entertainment, the dance begins, and the war song is sung, it having a relation to their intended expedition and conquest, or to their courage, their dexterity in fighting, and the manner in which they will vanquish their enemies, uttered in strong and pathetic expressions, with a tone that inspires terror.

THEIR women have such influence in these consultations, that the issue depends much upon them: for, if any one of them, in conjunction with the chiefs, is disposed to excite one who does not immediately depend upon them to join in the war, she presents him, by the hands of some trusty young warrior, a string of wampum, which seldom fails of producing the effect: but, when they solicit an offensive or defensive alliance with a whole nation, they send an embassy with a large belt of wampum and a bloody hatchet, inviting them to come and drink the blood of their enemies.

BEFORE their acquaintance with the Europeans, the wampum, used upon these and other occasions, was formed only of small shells picked up on the sea-coasts, and the banks of the lakes. But it now consists of cylindrical beads, made of white and black shells, which are esteemed, among them, as much as silver and gold among us. The black they think the most valuable, but both of them are their greatest riches and ornaments. They have the art of stringing, twisting, and interweaving them in their belts, collars, blankets, &c. in ten thousand different forms and figures, so as not only to be ornaments for every part of dress, but expressive of all their important transactions. They dye the wampum of various colours, and shades; and as they are made significant of almost every thing they please, by these their records are kept, and their thoughts communicated.

icated to one another, in some degree as ours are by writing. Thus the belts that pass from one nation to another, in all important transactions, are carefully preserved in the cabbins of their chiefs, and serve, both as a public treasure, and a kind of record or history.

EACH nation or tribe has it's distinct ensigns or coats of arms, which generally consist of some animal. Thus the Five Nations have the bear, wolf, otter, eagle, and tortoise: the tribes are generally distinguished by these names, and a rude sketch of those animals are pricked and painted on several parts of their bodies. When they march through the woods, they generally, at every incampment, cut the figure of their arms on trees, especially when they have had a successful campaign, that travellers may know they have been there.

THEIR military appearance is terrible. They cut off all their hair, except a spot on the crown of the head, and pluck off the eye-brows. The lock left upon the head is divided into several parts, each of which is stiffened and intermixed with beads and feathers of various shapes and colours; the whole twisted and connected together, till it takes a form somewhat resembling the modern pampadour upon the top of the head; which is painted red down to the eye-brows, and sprinkled over with white down. The gristles of their ears are slit almost round, and hung with ornaments that have generally the figure of some bird or beast drawn upon them. Their noses are likewise bored and hung with beads, and their faces painted with various colours. On their breast, they wear a gorget of brass, or some other metal; and by a string, which hangs down from the neck, is suspended the scalping knife. Thus equipped they march forth, singing their war songs, till they
lose

lose sight of their village ; and are generally followed by the women, who assist them in carrying their baggage, but generally return before they proceed to an engagement.

THEY have commonly one commander for every ten men, and, if the number amounts to a hundred, a general is appointed, not strictly to command, but to give his opinion. They have no stated rules of discipline, or fixed methods of carrying on a war ; but make their attacks in as many different ways as there are occasions, but generally in flying parties, equipped for that purpose with a thin light dress, usually consisting of nothing more than a shirt.

THE weapons, in use among those who trade with the English, are commonly a firelock, hatchet, and scalping knife ; but the others use tomahawks, bows, and pikes.

THE tomahawk is an ancient weapon used by them in war, before they knew the use of iron and steel ; since which hatchets have been substituted in their room ; but it still retains it's use and importance, and, like the calmut or pipe of peace, which we shall hereafter describe, is frequently very significant. This instrument has a long handle, and towards the other end is a round knob of solid wood, calculated to knock a man down ; on the side is a point bending a little towards the handle, and from the knob projects another point of a considerable length, to thrust with like a spear. The tomahawk is ornamented with paintings and figures, disposed in many significant forms, according to the end for which it is used ; and on it is kept a kind of journal of their marches and most important occurrences, in a sort of hieroglyphics. When the council is assembled to deliberate on war, the tomahawk is coloured red, and,

and, when the council is over, this, or some other of the same kind, is sent to every tribe concerned, together with a belt of wampum. The person, having delivered his message, throws the tomahawk on the ground, and, if they chuse to join them, the tomahawk is taken up by one of the most expert warriors; if not, it is returned with a belt of their wampum, suited to the occasion.

BUT to return: every morning the commander harangues his detachment, giving his advice for the conduct of affairs during the day. If on any occasion he would detach a party, he proposes the affair and gives his opinion how, and by what number, it should be performed; and it seldom happens that he is opposed in any of his measures; for the qualifications, necessary to recommend a person to the chief command, are his being fortunate, brave, and disinterested; and they cheerfully obey one whom they believe possessed of all these qualifications.

THE Indians, on returning from a successful campaign, manage their march so as to approach their village towards the evening, and then send two or three to acquaint their chief and the whole village with the most material circumstances of the campaign. The next morning, as soon as it is light, they give their prisoners new cloaths, adorn their heads with feathers, paint their faces with various colours, and put into their hands a white staff, tasselled round with the tails of deer. The war captain then giving as many yells, as he has taken scalps and prisoners, the whole village assemble at the water-side. As soon as the warriors appear, four or five young men get into a canoe, if they come by water, or otherwise march by land. The two first, carrying each a calmut, go singing to search the prisoners, whom they lead in triumph
to

to the cabbin, where they are to receive their doom. The owner of this cabbin has the power of determining their fate, though it is frequently left to some woman, who has lost her husband, son, or brother, in the war; and when this is the case, she usually adopts him in the place of the deceased. The prisoner has victuals immediately given him, and, while he is at this repast, a consultation is held; and, if it be resolved to save his life, two young men untie him, and taking him by the hands, lead him to the cabbin of the person into whose family he is to be adopted, where he is received with all imaginable marks of kindness. He is treated as a friend, as a husband, or as a brother; and they soon love him with the same tenderness as if he stood in one of those relations to them. But alas! if the sentence be death, these people, who, in other respects, behave with the utmost humanity, shew that they are truly savages; for sentence is no sooner passed, than the whole village set up the death cry; and the execution of him, whom they had hesitated, whether he should not have a tender relation to them, is no longer deferred than they can make the most necessary preparations for treating him with the most infernal cruelty. They first strip him, and, fixing two posts in the ground, fasten two pieces of wood from one to the other; one about two feet from the ground, and the other about five or six feet higher: then obliging the unhappy victim to stand upon the lower cross-piece, they tie his legs to it, a little asunder: his hands are extended and tied to the angles formed by the upper piece. In this posture they burn him all over the body, sometimes first daubing him with pitch. The whole village, men, women, and children, assemble around him, every one torturing him in what manner they please,

please, each striving to exceed the other in cruelty; but, if none of them are inclined to lengthen out his torments, he is either shot to death, or inclosed with dry bark, to which they set fire. They then leave him on the frame, and in the evening run from cabin to cabin, superstitiously striking, with small twigs, the walls, furniture, and roofs, to prevent his spirit remaining there, to revenge their cruelties. The remainder of the day, and the night following, are spent in rejoicing.

THIS is the most usual method of murdering their prisoners; but sometimes they fasten them to a single stake, and make a fire round them; at others they scald them to death, and at others cruelly mangle their limbs, tear their flesh, and cut off their fingers and toes, joint by joint. What appears most extraordinary, is, that, if the sufferer be an Indian, there seems, during the whole time of his execution, a contest which shall exceed, they in inflicting the most horrid pains, or he in despising them: not a groan, not a sigh, not a single distortion of countenance escapes him, in the midst of his torments. It is even said, that he recounts his own exploits, tells them the cruelties he has inflicted upon their countrymen, and threatens them with the revenge that will attend his death; that he even reproaches them for their ignorance in the art of tormenting; points out methods of more exquisite torture, and more sensible parts of his body to be afflicted. But perhaps these instances of intrepidity are somewhat exaggerated. However, they frequently kill their prisoners on the spot, where they have taken them, or in their way home, if they have any fear of their escape, or find it inconvenient to carry them farther. These instances, says the author of the *New System of Geography*, shew the inconsistencies, to which

which human nature is liable, and the benefit these people would receive from believing the Divine revelation, which breathes an uniform humanity, and the forgiveness of our enemies ; for, had they those dispositions, and were they taught to treat their enemies in the manner our holy religion inspires, how consistent, how amiable, would be their character.

THE scalps are considered as the trophies of their bravery, and these they hang up in their houses, they being esteemed according to their number. They have solemn days appointed, when the young men gain a new name or title of honour from their chiefs ; and these titles are given according to the qualities of the person, and his performances, of which these scalps are the evidence. This is all the reward they receive for the dangers and fatigues of war ; and this they think abundantly sufficient.

WE ought not to conclude our account of their government and manners, without describing the calmut, or pipe of peace, which is held in the utmost reverence. The bowl is made of a kind of soft red stone, hollowed out ; and the stem is of cane, or a light wood, painted with different colours, and adorned with the heads, tails, and feathers of the most beautiful birds. It is used to smoke either tobacco, or some other herb instead of it, when they enter into an alliance, or any solemn engagement ; this being esteemed the most sacred oath that can be taken, the violation of which is thought to be most infamous, and deserving severe punishment in the other world. When they treat of war, the whole pipe, with all its ornaments, is red ; sometimes it is red only on one side, and by the disposition of the feathers, &c. one acquainted with their customs, knows, at first sight, the

the intentions or desires of the nation who present it. In all treaties, smoking the calmut is considered as a sacred oath, as the seal of their decrees, and a pledge of their performance of them.

TRADE, MANUFACTURES, &c.

THOUGH we have already mentioned the produce and articles of commerce belonging to each of our colonies in America, we believe we cannot better conclude this chapter, than by a summary account of that trade, and a general view of the commerce they carry on, not only among themselves, and with their neighbours on the continent, but with the European nations, and particularly their mother-country.

THESE colonies, says a very sensible and judicious author *, are to their mother-country a source of wealth and strength ; which is not always the case between colonies and their mother-country. Spain, for instance, though she has possessed herself of the gold and silver mines of Mexico and Peru, is evidently a loser by the bargain ; for these provinces have drained the mother-country of her children, left her plains uncultivated, and her vines unpruned. It is true, she imports a great deal of treasure from her colonies, but for what purpose ? Why, to purchase for her colonies those necessaries and luxuries which she is by no means in a condition to supply them with herself. For, of forty millions remitted from her colonies, not above two and a quarter can be returned of

* See a small work intitled An account of the constitution and present state of Great Britain, together with a view of it's trade, policy, and interest. Printed for Mr. Newbery.

the manufactures, or produce of Spain, the rest being procured from foreign markets ; so that Spain deals with her colonies for forty millions, and the colonies with the mother-country for only two millions and a quarter. This is so much to the disadvantage of Spain, that they can only be considered as a sort of factor or agent to her colonies, which are every day drawing her strength to them. But if we survey the British American colonies, and consider their connexion and intercourse with their mother country, we shall find things amazingly different ; here their duties and endeavours are reciprocal, and their trade carried on to mutual advantage. Our colonies export to their mother-country the surplus of their produce, which is partly consumed in Britain, and the rest sold from thence to other nations ; and the whole aggregate amount is generally remitted from the mother country to her colonies, in goods of her own manufacture ; whence it follows, that, as Britain exchanges goods of her own manufacture for the articles of commerce she receives from her colonies, so much as they amount to, so much is the real gain of the nation ; and, on the other hand, as the colonies export to Great Britain only the surplus of their own produce for the articles of commerce they receive from thence, and which are in a manner necessary to their subsistence, so much as that amounts to, so much is the clear gain to their colonies. While trade is carried on in this manner, both parties must grow powerful ; but, should a mine of gold, says our author, be found amongst them, however desirable that metal may be, I should dread the consequence.

To begin with our infant colonies of East and West Florida, which as they came into our possession so lately as the conclusion of the last peace,
little

little can yet be expected from them : but the latter is finely situated for carrying on a very lucrative trade with the Spaniards, and, from the spirit with which many gentlemen have begun to cultivate the land, there is little doubt but that an advantageous commerce will soon be carried on between them and England.

THE colony of Georgia, which began to be settled in the year 1733, has not indeed answered the expectations of the public; but no branch seems so likely to succeed and bring wealth to that colony, as well as to this nation, as that of silk; the soil being extremely proper for the culture of the mulberry-tree, and the climate no less agreeable to the silk-worm. As a proof of this we need only observe, that, in the year 1739, M. Augspurger, a Swiss, brought over a parcel of raw silk from Georgia, and deposed before a Master in Chancery, that he received it from Mr. Thomas Jones, store-keeper to the trustees for establishing that colony, who told him it was the produce of Georgia. This being shewn at the trustees office to one of the greatest silk-weavers in England, and to an eminent raw-silk merchant, they declared it was as fine as any Indian silk, and worth at least twenty shillings a pound. Several other parcels of fine silk have been since brought from thence; but it's produce in this article has hitherto borne no proportion to the demand for it. There is likewise great reason to believe, that very good wines might in time be made of the grapes in this colony, and the same may be said of several of the British settlements in America. The coat of the natural grape indeed is not strong enough to contain the juice, so that, when it is ripe, it bursts; and the frost about the vernal equinox often kills the vines, when they are shooting: and, as for Eu-

ropean vines, many are destroyed by the insects of the country. Experience however has shewn, that by grafting the European on the wild vine all these inconveniencies are in a good measure prevented; for then it shoots later, and so escapes the frost better; the skin of the grape becomes thicker and stronger, and the insects do less prejudice. Some vines brought from Portugal and Madeira have thriven very well, even in the most barren parts of the province; and, in short, nothing seems wanting but a sufficient number of inhabitants, to render Georgia a profitable and delightful colony.

THE produce of North and South Carolina is much the same as that of Georgia would be if properly cultivated, but the quantity of rice exported from thence, as hath been already intimated, is very surprising. It is sown in furrows about eighteen inches distant, a peck being sufficient for an acre, which seldom yields less than thirty bushels, and sometimes twice that quantity. They reap it in September and the beginning of October; and the produce is now so great, that upon a medium they ship off annually about sixty thousand barrels, each containing four hundred weight. This trade employs above ten thousand tons of shipping, and returns to Great Britain at least eighty thousand pounds a year; and, according to the account of a late author, it continues increasing, so that in time all the markets of Europe may probably be supplied with rice from that province. It is said that for many years they have also exported about seventy thousand deer-skins, for which they trade with the Indians, giving them in exchange guns, powder, knives, scissars, looking-glasses, beads, and many other trifles; likewise some coarse cloths, duffils, callicoes, &c. for the women; which goods they sometimes send five or six

fix hundred miles to the westward of Charles-Town, though in general this traffick is limited within the compass of three or four hundred miles. From this province they also export very considerable quantities of pitch, tar, turpentine, deal boards, cedar planks, pipe-staves, masts, yards, and all sorts of timber; insomuch that above two hundred ships have of late years sailed annually from Carolina, laden with the produce of the country. The beef and pork of Carolina find a good market in the sugar islands.

THE trade of Virginia, as well as that of Maryland, as we have already observed, consists chiefly in tobacco, in which more than two hundred sail of ships are constantly employed, which one with another are reckoned to carry at least three hundred hogheads, in all sixty thousand and upwards. But let us suppose, as some do, the quantity exported to England to be seventy thousand hogheads yearly, each containing four hundred weight of tobacco; and that only one half of this quantity is consumed in England; then the duty of these thirty-five thousand hogheads (at 8*l.* each) will amount to 280,000*l.* The other half, which is exported from hence, will not bring above one fifth of that sum into the exchequer; but, if we allow no more than 50,000*l.* for the duty of the thirty-five thousand hogheads exported, the whole amount of the customs on the seventy thousand hogheads will be 330,000*l.* and so much this commodity certainly brings into the exchequer in time of peace, but in time of war our trade is more uncertain—This branch of commerce is a very beneficial one to England, for, besides all other advantages, the profit arising from the tobacco exported hence to foreign markets has been computed to increase the general stock

of the nation 150,000 l. a year: And then, as our colonies take vast quantities of English manufactures in return for the tobacco and other commodities they send us, it is undoubtedly our interest to give them all possible encouragement and protection.

THE produce of the delightful country of Pennsylvania is chiefly wheat and other grain, of which they export great quantities to the rest of our American colonies, as well as to Europe. They likewise export barrelled beef, pork, hams, cheese, butter, soap, wax, candles, cyder, pipe-staves, masts, boards, timber, several sorts of skins and furs, and divers other commodities: and besides their own produce they frequently send us logwood, sugar, rice, pitch, tar, train-oil, and, in short, whatever they think we want, or they can spare. Now to shew the advantage arising to Great Britain from this province, let us suppose what it seems is a pretty common practice: a Londoner, or any Englishman, lays out here in our manufactures to the value of five hundred pounds, these will purchase in Pennsylvania at least six thousand six hundred bushels of wheat, which, sent to Lisbon, at four shillings a bushel, come to upwards of thirteen hundred pounds; which money is sure to be sent home to England at last, if not immediately; and is of the same advantage for remittance or exchange as any such sum produced by goods sent from hence directly. It is also usual for the captain, if the ship be plantation-built, to have orders to sell it at a certain price, if he can get it; which often happens, and in that case the whole produce of ship and cargo is sent to England; and, if it be not the property of Englishmen residing here, it is always ordered to be laid out in goods of the manufacture of this kingdom, or such as are imported

ported hither, and sent to Pensylvania. In another branch this province is likewise of singular advantage to England: for all the money they get by trading with the Dutch, French, Spaniards, or others, which is not inconsiderable, is sent directly hither; insomuch that it has been computed, that sixty thousand pounds in cash are annually remitted to us from Pensylvania, and returned in the goods and manufactures of this kingdom.—Let us add, that Philadelphia, the capital of Pensylvania, is already become one of the best trading towns of the British empire in America, for which it is excellently situated; and in all probability will continue to increase in commerce, riches, and buildings, till it will have no equal in that part of the world.

WHAT has been said of Pensylvania, with regard to it's produce and trade, may in a great measure be said of New Jersey, the inhabitants whereof sell their flour, pork, and other provisions, particularly great quantities of pease, to the merchants of New York, who export them to the sugar islands. This province likewise sends some skins and furs to England, and train-oil, fish, &c. to Portugal, Spain, and the Canaries. In the year 1720, governor Hunter reported that there were no considerable manufactures in the country, but that their trade consisted chiefly in pitch, tar, and the other articles we have mentioned. However, the increase of it's trade and produce may be judged of by that of it's number of hands, especially Negroes, who are ten times as many as they were fifty years ago.

THE inhabitants of New York deal largely with the Indians for the skins of elks, deer, bears, beavers, otters, and other furs, most of which they send to England. They have also a considerable trade to Barbadoes and the rest of the sugar islands

with horses, beef, bacon, pork, pease, corn, flour, and pipe-staves, for which they receive sugar, molasses, rum, &c. in return. A considerable commerce is likewise carried on from this province to Madeira and the Azores with pipe-staves and fish, for which they load their ships back with wine and brandy. But how advantageous the trade of New York is to England appears from what is affirmed, that, as the winters there are pretty severe, they take off more of our woollen manufactures than all the islands put together, Jamaica excepted, and send us more gold and silver in return. Upon the whole, it is generally allowed, that there is not a colony in America which makes a better figure than this does, or where the people seem to have a greater spirit of industry.

WE now come to New England, the seat of the most powerful colony the English have in America, and which is likewise of great advantage to this nation, by taking from us all sorts of woollen manufactures, linen, sail-cloth, cordage for rigging their ships, haberdashery goods, &c. to the value of three or four hundred thousand pounds per annum. Their remittances were formerly made to us in bullion* or in specie, but now they send them by the way of Spain, Portugal, or Italy, where they sell their fish, and the produce of it comes hither in gold and silver, or bills of exchange. They likewise make us very valuable returns in masts, perhaps the fairest and largest in the world, besides cast-iron, pitch, tar, turpentine, rosin,

* This word denotes silver or gold in the mass or lump, not coined or wrought: such are ingots, as we call them, which are melted down in a sort of mould.

plank, knees for ships, and other sorts of timber for various uses. These commodities, especially pitch and tar, were formerly purchased of the Swedes at an intolerable price; but, since the encouragement given to their importation from New England, they have fallen to half their value. This province also sends us log-wood for dying our woollen goods, in quantities more than sufficient for our own use, the surplus being sent to Holland, Hamburgh, and other European markets: and it is chiefly owing to the industry of the New England people, that this useful commodity, for which we used to pay thirty or forty pounds a ton to the Spaniards, is reduced to about twelve pounds, of which four pounds five shillings are paid to the crown for custom. We might mention other articles, as whale-bone and oil, which are imported from New England in no inconsiderable quantities, and which we must otherwise purchase of the Dutch with ready money. This colony is likewise of vast service to our sugar plantations, which without it's help (and that of some other provinces) could not make it cheap enough, nor in sufficient quantities, to answer the markets of Europe; for, if they were obliged to sow wheat or plant as much Indian corn as they wanted, they must needs plant fewer canes. From hence they are also supplied with horses for their mills, staves for their casks, timber, boards, hoops, butter, cheese, oil, tallow, apples, onions, flour, beans, pease, barrelled pork, salt-fish and other commodities, of which it is computed that Barbadoes alone takes from New England to the value of 200,000 l. a year. Lastly, the trade of this colony employing not less than six hundred sail of ships, it is an excellent nursery of seamen for the royal navy; so that in queen Anne's war it is said

there was hardly a ship in commission without some New England sailors on board, which so distressed it's merchants that they were obliged to man their vessels with Indians and Negroes.—We ought likewise to take notice, that a great many ships are built in New England, more than in any other of our colonies, for the merchants of London and Barbadoes; and some for mere sale, which are sent to England to market. Their ships have the reputation of being very well built and strong, but to this strength it is chiefly imputed that they are not always the best sailors. And it is worth observing, what a certain writer on trade affirms, that it is in our power to be supplied from New England with all the naval stores that we now fetch from the Baltic; and that, if this matter were once thoroughly considered by parliament, it might produce some law that would render this colony still more beneficial to the nation.—As to their manufactures, it appears by proper accounts sent from thence to England, that they have some forges for making bar-iron, some furnaces for cast-iron, and that they make all sorts of iron-work for shipping. They tan a considerable quantity of leather, and make hats not only for their own use, but for exportation; and a native of that country has lately informed us, that the Irish people settled there have brought the linen manufacture to such perfection, that at Londonderry in New Hampshire it has often been sold for six shillings sterling a yard, and commonly from twenty-pence to two shillings: But New England is still supplied with sixteen parts in twenty of British manufactures.

THE trade of Nova Scotia consists in bartering European goods with the Indians for skins and furs; from the several fisheries erected in different harbours,

harbours, particularly for cod, salmon, and sturgeon; the inhabitants therefore export great quantities both of fish and furs, together with lumber, as joists, staves, hoops, &c. and purchase, from England, linen and woollen cloths, stockings, shoes, working tools, kitchen utensils, all kinds of hardware, and furniture.

CANADA, which was conquered from the French during the late war, was attended with the advantage on it's being ceded to England, of having a hundred thousand inhabitants, who then became subjects to the king of Great Britain, and were consequently obliged to trade only with this kingdom for all the European goods they want, and to sell to British subjects the produce of that extensive country, particularly the immense quantities of furs, with which the French were formerly supplied, and who are now obliged to purchase them of our merchants. They also export great quantities of deer, elk, and moose skins, masts, yards, lumber, &c.

C H A P. III.

Of the AMERICAN ISLANDS.

THE islands which lie about the coast of the vast continent of America are almost innumerable, many of them uninhabited, or in other respects too inconsiderable to deserve particular notice. Even Newfoundland, though a large island, is very little known, and affords us nothing curious or entertaining but it's fishery hereafter described. The American islands of the greatest importance are that vast number called the Antilles, which lie at the entrance of the gulph of Mexico,

extending from the coast of Florida to that of New Andalusia in Terra Firma. Some call them the Caribbees, from the first inhabitants; but this is a denomination that most geographers confine to the Leeward Islands. Cuba, Hispaniola, Porto Rico, and Jamaica, are called the Great Antilles; the last of which is possessed by the English, the three others by the Spaniards. The most considerable of the Little Antilles are Barbadoes, St. Christopher's, Nevis, Antegoa, Montserrat, Anguilla, Barbuda, Tobago, Dominica, St. Lucia, St. Vincent, Granada, the Granadillos, possessed by the English; Guadaloupe, Martinico, Marigalante, Santa Cruz, St. Bartholomew, by the French; St. Eustatia, Saba, Bonaire, Curassow, and Oruba, by the Dutch; and La Trinidad and Margarita by the Spaniards.

BESIDES these, there are the islands that lie to the south of the straits of Magellan, which are commonly distinguished by the name of Terra del Fuego, or the land of Fire; they being thus called from the fires and smoke perceived by the first discoverers of them, rising from a volcano in the largest island, the flame of which, though not seen in the day-time, is visible at a vast distance in the night, and sometimes throws up great quantities of stones and ashes. These islands extend along the coast from east to west above four hundred miles, and were supposed to join the continent till Magellan sailed through the straits that part them from it. They were then thought one continued island, till several navigators found they were divided by narrow channels. Terra del Fuego, the largest of these islands, is rough and mountainous, with the tops of the mountains covered with snow; but is said to have fertile vallies, plains, and

and pasture-grounds, watered by a multitude of fine springs that fall from the mountains. The lands are said to abound with wood and stone, and to be inhabited by a people as white as the Europeans, who, notwithstanding the extreme severity of the climate, go almost, if not quite, naked, and paint their bodies of several colours. The streights of Magellan are above a hundred leagues in length, but the breadth is various, it being in some places only a league wide, and in others two or more. There are many safe harbours running into the continent, with narrow entrances, and bays, that extend quite out of sight, encompassed by high mountains, that shelter them on all sides.

To the east of the islands that form this streight, is Staten Land, and between it and Terra del Fuego, runs Streight Le Maire, which is seven or eight leagues in length. The island of Staten Land far surpasses Terra del Fuego in the wildness of its appearance, it seeming to be intirely composed of inaccessible rocks, without any mixture of earth or mould. These terminate in a vast number of ragged points rising to a prodigious height, and all of them covered with everlasting snow. The points themselves are on every side surrounded with frightful precipices, and often overhang in a most surprising manner, while the hills which bear them are generally separated from each other by narrow clefts, which appear as if the country had been frequently rent by earthquakes; these chasms being nearly perpendicular, and extending through the substance of the main rocks, almost to their very bottom; nothing can be imagined more savage and gloomy, than the whole aspect of this coast.

The SPANISH AMERICAN ISLANDS.

FROM the southern part of America, it seems natural for us to pass to the western side, where we scarce find any island worth notice, except that of Juan Fernandes, of which we shall take a short extract from the description given of it in commodore Anson's voyage. This island is of an irregular figure, about fifteen miles long, and six broad; but is remarkable for it's beauty. The face of the country, at least of the north part of the island, is extremely singular: the woods that cover most of the steepest hills, being free from bushes and underwood, afford an easy passage through every part of them; and the irregularity of the hills and precipices trace out, by their various combinations, a great number of romantic vallies, most of which have a stream of the clearest water running through them that falls in cascades from rock to rock, as the bottom of the valley, by the course of the neighbouring hills, is broken into a sudden sharp descent. In these vallies, are some particular spots, where the shade and fragrance of the contiguous woods, the loftiness of the overhanging rocks, and the transparency and frequent falls of the neighbouring streams, present scenes of such elegance and dignity as would with difficulty be rivalled in any other part of the globe; for here the simple productions of unassisted nature may be said to excel all the fictitious descriptions of the most animated imagination. The piece of ground, in which commodore Anson pitched his tent, was a small lawn, that lay on a little ascent, at the distance of about half a mile from the sea. In the front of his tent was a large avenue cut through the woods to the sea-side, which, sloping to the water with a gentle descent

descent, opened a prospect of the bay and the ships at anchor. This lawn was screened behind by a tall wood of myrtle, sweeping round it in the form of a theatre; the slope on which the wood stood; rising with a much sharper ascent than the lawn itself, though not so much, but that the hills and precipices within land, towered up considerably above the tops of the trees, and added to the grandeur of the view. There were besides two streams of crystal water, which ran to the right and left of the tent, within a hundred yards distance; and were shaded by the trees which cut the lawns on either side, and completed the symmetry of the whole.

SEVERAL of the hills have a peculiar sort of red earth, exceeding vermilion in colour. The trees of the woods, on the northern side of the island, are chiefly aromatics of many different sorts, but none of them are so large as to yield any considerable timber, except the myrtle-trees, which are the biggest on the island; but even these will not work to a greater length than forty feet. The top of the myrtle is circular, and appears as uniform as if clipped by art. Here is also the pimento-tree, the cabbage-tree, and a great number of plants, adapted to those scorbutic disorders, contracted by salt diet and long voyages, and likewise many acres of ground covered with oats and clover.

THIS island formerly abounded with goats; but their number is greatly diminished, for the Spaniards, being informed of the advantages, which the buccaneers and privateers derived from the goats flesh, with which they were here furnished, endeavoured to deprive their enemies of this relief, by setting on shore a number of large dogs, who have increased so fast, that they have destroyed all the goats in the accessible part of the country, only a few remaining among the crags and precipices, where
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the dogs cannot follow them. These are divided into separate herds, which inhabit distinct fastnesses, and never mingle with each other. Our author mentions an extraordinary dispute between a herd of these animals, and a number of dogs. Some men, going in a boat into the eastern bay, perceived the dogs running very eagerly; and, being willing to discover what game they were after, they lay upon their oars to view them, and at last saw them take to a hill, where looking a little farther they observed, upon the ridge of it, an herd of goats that seemed drawn up for their reception. There was a very narrow pass skirted on each side by precipices, on which the master of the herd posted himself fronting the enemy, the rest of the goats being all behind, where the ground was more open. As this spot was inaccessible by any other path, except where this champion had placed himself, the dogs, though they ran up the hill with great alacrity, yet, when they came within about twenty yards of him, did not dare to encounter him, as he would infallibly have driven them down the precipice. They therefore desisted, and, giving over the chase, quietly laid themselves down, panting for breath. There are but few birds, and those chiefly hawks, blackbirds, owls, and humming-birds.

UPON this island is a great number of seals and sea-lions: the latter has some resemblance to a seal, but is much larger, and it's flesh has some resemblance to that of beef. When full-grown, they are from twelve to twenty feet in length, and from eight to fifteen in circumference; and so extremely fat, that, having cut through the skin, which is about an inch in thickness, there is at least a foot of fat, before you come at either lean or bones. They are also very full of blood; for, if they are
deeply

deeply wounded in a dozen places, there will instantly gush out as many fountains of blood, spouting to a considerable distance. Their skins are covered with short hair of a light dun-colour; but their tails and their fins, which on shore serve them for feet, are almost black; these fins are divided at the ends like fingers, the web which joins them not reaching to the extremities; and each of these fingers is furnished with a nail. The head, which is small, in proportion to the rest of the body, terminates in a snout, and they have whiskers like those of a cat, with small eyes and ears; and the nostrils, which are also very small, are the only parts destitute of hair. In each jaw they have a row of large pointed teeth. The males have a large snout or trunk hanging down five feet six inches below the end of the upper jaw, which the females have not; and this renders it easy to distinguish the sexes; and besides the males are much the largest. These animals divide their time equally between the sea and land, continuing at sea all the summer, and coming on shore at the setting in of winter, where they reside during that whole season. In this interval, they ingender, and bring forth their young, having generally two at a birth, which they suckle with their milk, they being at first about the size of a full-grown seal. While the sea lions continue on shore, they feed on the grass and verdure, that grows near the banks of the fresh-water streams; and, when not employed in feeding, sleep in herds, in the most miry places they can find. As they are of a lethargic disposition, and not easily awakened, each herd places some of the males at a distance, which never fail to alarm them, when any one attempts to molest, or even to approach them; which they do by making a very loud noise, sometimes grunting like hogs, and

and at others snorting like horses in full vigour. The males have often furious battles, when they gore each other with their teeth, and cover one another with blood. The author of lord Anson's voyage takes notice of one whom he says they named the bashaw, he generally lying surrounded with a number of females, which no other male dared approach ; but had not acquired that envied pre-eminence without many bloody contests, as appeared from the numerous scars visible in every part of his body.

THE bay is most plentifully stored with the greatest variety of fish, particularly cod of a prodigious size, which are no less numerous than on the banks of Newfoundland ; also large bream, silver-fish, cavallies, gropers, maids, a black fish much esteemed, called by some the chimney-sweeper, in shape resembling a carp ; excellent cray-fish, that generally weigh eight or nine pounds, and are of an exquisite taste ; besides congres of a peculiar kind. There are also a great number of large sharks and dog-fish.

IT is now time to leave the pleasant little island of Juan Fernandez, and come to speak more particularly of the Antilles, with which we are better acquainted, as many of them are peopled by colonies from our own country, and other European nations. Of these islands Hispaniola and Cuba, being much the largest, seem to require our first attention ; though we shall not find much in them so curious as to detain us long in the description. Hispaniola, or St. Domingo, (as it is otherwise called) belongs partly to the French, and partly to the Spaniards ; and is allowed to be as fruitful and as pleasant as any in that part of the world, having vast forests of cabbage-trees, palms, elms, oaks, pines, &c. besides great variety of fruit-trees, whose
fruit

fruit is more lovely to the eye, and better-tasted, than in many of the neighbouring islands ; such as grapes, oranges, citrons, apricots, and many others, whoses names it is needless to mention. Here are all the birds common to the West-Indies, the meadows are filled with innumerable herds of cattle, and the French part of the island has horses enough to supply all the adjacent colonies. There is scarce a country in the world better watered by brooks or navigable rivers, which abound with fish, and gold-dust is found in some of their sands. It is said there are also mines of gold and silver, which, though formerly wrought, the Spaniards have found themselves too weak to carry on for their own advantage, and take all possible care to conceal them from others. The chief commodities of the island are hides, sugar, indigo, cotton, tobacco, wax, honey, and various kinds of drugs and dyers wood. The French, in particular, since their settlement here, have very much improved their sugar plantations ; and they are now reckoned equal, if not superior, to the Spaniards in numbers, though both together, with all their slaves, are very far short of what an island of such extent and fertility is capable of maintaining.

THE soil of Cuba, if we except the ridge of mountains that runs through the island from east to west, is generally very fruitful, and produces all the commodities known in our American islands, such as ginger, long-pepper, mastich, aloes, and various other drugs and spices. It's woods consist of large cedars and other odoriferous trees, oaks, pines, palm-trees, cotton-trees, vines, &c. and there are mines of copper, if not of gold, the dust whereof is found in the sands of the rivers, as well as in Hispaniola. This island has many conveniencies belonging to it both for making salt
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and catching fish ; and it's shores abound with sea-fowl, particularly a sort of cranes, which are white when young, but when old are of several colours. It has plenty of horses, sheep, wild boars, hogs, and cattle of a larger and better breed than most parts of America, which have multiplied to such a prodigious degree, since they were first brought hither by the Spaniards, that many of them run wild in the woods, and are killed purely for their hides, in which business the Negroes are employed. Hides therefore make a great branch of the trade of the island ; and abundance of tobacco, both in leaf and snuff, commonly called Havanna from the chief city and port of Cuba, are exported thence to New Spain and the South Sea, besides what is sent to Europe. Upon the whole, it is a fine island, and it's capital just mentioned is perhaps a city of the greatest strength and importance to the Spaniards of all they possess in America, being the place of rendezvous for their fleets in their return from that part of the world to Europe, and lying at the mouth of the gulph of Florida, through which they are obliged to pass ; so that the Spaniards, not without reason, call it the key of the West Indies.

HERE we ought just to take notice of Porto Rico, the third of the Great Antilles possessed by the Spaniards, though much less than either of the former. This is likewise divided by a chain of mountains from east to west, and is tolerably well watered with brooks and rivers. The north part, which is not so fertile as the south, has been reported to have mines of quicksilver, tin, lead, and some of gold and silver ; but there are none of the latter wrought at present, nor were there ever any considerable ones in the island, though it's rivers are not without gold-dust among their sand and gravel.

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It has plenty of good ship-timber, and variety of fruit-trees, such as are common to it with the neighbouring islands; and, like those, it has great flocks of parrots, wood-pigeons, and other wild and tame fowl, with all manner of European poultry. It's coasts abound with fish, and here are a sort of land-crabs that burrow in the ground like rabbits, of which we shall speak more hereafter. It's principal commodities are sugar, hides, cotton, and several sorts of drugs; also salt, and oranges and lemons, both as fruit and in sweet-meats.

BRITISH AMERICAN ISLANDS.

THE next and last of the Great Antilles to be described is Jamaica, a flourishing island now possessed by the English, and which should have been mentioned before Porto Rico, as being larger and more valuable, but that we chose to speak of the Spanish possessions together. Sir Hans Sloane and Dr. Stubbs will furnish us with almost every thing that is curious relating to Jamaica, which, like the islands abovementioned, has a ridge of hills running through it, besides others scattered over the country, that give rise to abundance of fine rivers stored with fish of various kinds, but scarce any of them navigable except by canoes, wherein sugars and other goods are carried from the plantations to the sea-side, and from thence in schooners and sloops to Port Royal and Kingston, there to be shipped for England. This is occasioned either by their falling too precipitately from the mountains, or the shortness of their course: besides, they often carry with them great stones or pieces of timber, and generally much clay or earth, which fouls the water, and gives it a copperish taste, though,

though it proves good enough after settling some days in earthen jars. In dry years fresh water is very scarce at a distance from the rivers; and the well water near the sea, as at Port Royal, is blackish and unwholesome. There are some springs, as well as rivers, that are remarkable for their petrifying quality; and near point Morant, at the south east corner of the island, Sir Hans says there is a hot bath in a wood, whose water has been tried with great success, by drinking as well as bathing in it, for the cure of the belly-ach, the common disease of the county. In another place there are a great many salt springs, which being united form what is called the Salt River. Salt is made at Jamaica in ponds, into which the sea-water comes, and the water being exhaled by the heat of the sun, the salt is left at the bottom. Nor ought we to forget a remarkable lake in this island, which receives abundance of water from a river without any visible outlet.

THE mountains of Jamaica are most of them crowned with trees of a thousand different species, ever verdant, forming groves and cool retreats, and irregularly mixing their branches in a gay sort of confusion; the cedar and other tall trees rearing their lofty heads, and the *lignum vitæ*, mahogany, and numberless others thriving under their friendly shade. The valleys too are generally verdant, being refreshed with so many streams; but their greatest beauty consists in the plantations that adorn them, laid out with the nicest art, and producing as choice and valuable plants as any in the universe, particularly the sugar-cane*,
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* It is a question not yet decided among botanists, whether the ancients were acquainted with this cane, and whether they

of whose culture, the preparation of sugar, &c. we shall here give an account, which may serve likewise for Barbadoes, Antegoa, Nevis, and the rest of our sugar-islands; for not only the commodity, but the manufacture of it, is in all of them much the same.

THE reed or cane, which yields us such an agreeable juice, is like those others we see in morasses and on the edges of lakes, excepting that the skin of these latter is hard and dry, and their pith void of juice, whereas the skin of the sugar-cane is soft, and the spongy matter or pith it contains is very juicy, though that in a greater or less degree according to the goodness of the soil, it's exposure to the sun, the season it is cut in, and it's age; which four circumstances contribute equally to it's goodness and it's bulk. It usually grows to the height of six or seven feet, sometimes higher, exclusive of the long, green, tufted leaves at top, from the middle whereof arise the flower and the seed. The stem or stalk is divided by knots or joints, from whence likewise shoot out leaves, but

they knew how to express it's juice? All that we can gather from the arguments advanced on either side is, that, if they knew the cane and the juice, they did not know the art of condensing, hardening, and whitening it, and consequently knew nothing of our sugar. Salmasius however assures us, that the Arabs have used the art of making sugar, such as we now have it, above eight hundred years.—Another question among naturalists is, whether sugar-canes be originally of the West Indies, or whether they have been translated thither from the East? The learned of the last ages have been much divided on this point; but, since the dissertation of father Labat, published in 1722, there is no longer room to doubt but that the sugar-cane is as natural to America as India. All that can be said in favour of the latter is, that the Spaniards and Portuguese first learnt from the Orientals the art of expressing it's juice, boiling it, and reducing it into sugar.

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these usually fall as the cane rises ; and it is a sign either that the cane is not good, or that it is far from it's maturity, when the knots are seen beset with leaves. The cane is yellowish when ripe, and about an inch in diameter ; and it's juicy pith is then eaten freely, being very nourishing and wholesome if taken with moderation. The tops of the canes are likewise very good food for horses and black cattle*.

THE ground fit for sugar-canes is that which is light, soft, and spongy, lying on a descent proper to carry off the water, and well exposed to the sun. The usual manner of planting them is by digging long trenches, about six inches deep and as many broad, and about two feet distant from each other, laying a double row of canes along them from end to end. From every knot of the canes thus laid down in the furrows shoots up another cane ; and these young ones grow to the height of eighteen or twenty inches in about twelve weeks time, but do not arrive to maturity till they have been a year or fifteen months in the ground. The next care of the planter is to keep his canes free from weeds, and to observe whether any of his roots have failed, that the trenches may be supplied in time with others ; for, the crop being, by a neglect in either case, partly ripe and partly green at the same time, they cannot well be sepa-

* Mr. Smith tells us, that the bottom part of the sugar-cane top is about the thickness of one's finger, and that at Nevis they cut it into pieces about an inch and a half long, to give to their horses, being a very heartening food, and fattening them apice. They also give them the skinning of the sugar-coppers ; but that must be done sparingly at first, for fear of griping and perhaps killing them.

rated without more labour than they are worth, and then the planter burns them, as they stand. By this means indeed he loses a crop, but he does not lose his planting; for, the fire not touching the roots, they soon shoot out again, the soil is much bettered, and swarms of rats are destroyed, which often do great damage in these plantations. The present practice is to dung the canes, either when they are planted, or when they come to be two feet high; and this is the planter's greatest trouble and expence, for, were it not for this dunging, much fewer Negroes would be required.

WHEN the canes are ripe, they are cut up one at a time by a proper instrument, being too large to be mowed by a scythe; and, as they cut them, they trim them and chop off the tops, which, as above intimated, they reserve for their cattle. The canes are then bundled up in faggots, and carried to the mills, which are very curious machines, contrived to bruise them and express the liquor or juice therein contained. These mills are composed of three wooden rollers covered with plates of iron, and are of four kinds, being turned either by slaves, water, wind, or cattle. Those turned by the hand were first in use, but are now laid aside, as being an intolerable hardship to the poor Negroes who were doomed to that work, besides the slowness of their progress. Windmills are the most modern, and are not yet very common, except in Barbadoes and St. Christopher's, and among the Portuguese. These make good dispatch, but have this inconvenience, that they are not easily stopped, which proves sometimes fatal to the Negroes who feed them.

THE juice coming out of the canes, when pressed and broken between the rollers, is conveyed by

by a leaden canal into the sugar-house, which is near the mill, where it falls into a vessel, and thence runs into a copper or cauldron, to receive it's first preparation, only heated by a slow fire to make it simmer. With the liquor is here mixed a quantity of ashes and quick-lime; the effect of which mixture, together with the action of the fire, is, that the unctuous parts are separated from the rest, and raised to the top in the form of a thick scum, which they keep constantly taking off, and serves to feed poultry, horses, &c.—The juice in the next place is purified in a second copper, where a brisker fire makes it boil; and all the time the casting up of the scum is promoted by means of a strong lye composed of lime-water and other ingredients.—This done, it is purified in a third boiler, wherein is cast a lye that assists in purging it still farther, making it's impurities rise to the surface, whence they are taken with a skimmer.—Hence it is removed to a fourth boiler, where it is farther purified by a more violent fire; and hence to a fifth, where it is brought to the consistence of a syrup.—In a sixth boiler the syrup receives it's full coction; and here all the impurities which the former lyes had left are taken away by the injection of a new one, and a water of lime and alum. In this last copper there scarce remains a third of what was put into the first, the rest being wasted by frequent boilings and skimmings.—It is to be observed, that the size of the several coppers always diminishes from the first to the last, each being provided with a furnace to give a heat proportionable to the degree of coction the juice has received. In some large sugar-works there are also particular coppers for boiling and preparing the skimmings for farther uses.

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By thus passing successively a number of coppers, the juice of the canes is purified, thickened, and rendered fit to be converted into any of the kinds of sugar hereafter mentioned, which are all prepared in the American islands. According to F. Labat these are, 1. Crude sugar, or moscovado, which is that first drawn from the juice of the cane, and whereof all the rest are composed. The method of making it is that already described for sugars in general; but here we may add, that, when taken out of the sixth copper, it is put into a cooler, where, after stirring it briskly together, it is let stand to settle, till a crust, as thick a crown-piece, is formed thereon. The crust being formed, they stir it again, then put it into vessels, where it stands to settle till it be fit to barrel. 2. Strained sugar, though somewhat whiter than the former, is prepared in the same manner, with this difference, that to whiten it they strain the liquor through blankets, as it comes out of the first copper; which invention is owing to the English, who likewise put the sugar into wooden forms or moulds, and, when it has purified itself well, cut it in pieces, dry it in the sun, and barrel it up. 3. Earthed or clayed sugar is that which is whitened by means of earth laid on the top of the moulds it is put into to purge itself, and after a long process (too tedious to be here related) it is formed into loaves and baked, then pounded with huge wooden pestles, and put up in barrels. This is the white powder sugar. 4. Refined sugar is boiled and freed from it's impurities by throwing in lime-water, eggs, and other ingredients, which the earthed sugar is not; in other respects the process is much the same, only more care and exactness is used, and the refined sugar is drier and whiter.—Several

other sorts of sugar might be mentioned, but these seem to be the chief that are prepared in the sugar islands *.

BUT we must not forget to mention another commodity produced from the juice of the sugar-cane, viz. rum, a spirituous liquor well known amongst us, and distilled in great quantities in Jamaica and Barbadoes. The particular process of this distillation we shall not attempt to describe, but only observe, that Jamaica had for many years produced fine sugars, before the planters knew how to make rum; but, having learnt the art from those of Barbadoes, they are now reckoned to excel them in that commodity.

To this account of the sugar-cane and its produce perhaps it will not be amiss to subjoin a few observations on the qualities of sugar. Hoffman, speaking of sugar, says, that it is a temperate salt, and friendly to nature; but, however, it has been a point much disputed, whether in general it is wholesome or otherwise. According to some, it is heating, emollient, resolvent, purgative, and calculated to resist putrefaction; good for the stomach, breast, and lungs; promotes expectoration, softens internal tumours, cleanses ulcers of the

* Here it seems proper to add, (what should rather have been observed before) that in Canada and New England they obtain a species of sugar from the juice of a kind of maple-tree, by boiling it till ten gallons are reduced to a pint and a half, and then keeping it stirring to prevent its candying. A good tree, Mr. Dudley tells us, will yield twenty gallons of juice; and the physicians look upon the sugar to be as good for common use as that of the sugar-cane, and to exceed all others in its medicinal virtue. The famous syrup of maiden-hair of Canada is made with this sugar; which, as brought to us, is of a greyish colour, and tastes like other sugar.— See Philosophical Transactions, No. 171 and 364.

kidneys, bladder, and intestines, and hinders all corrosive substances from acting easily on the internal parts. According to others, it is injurious to scorbutic, hypochondriac, hysteric, and feverish patients, if used in considerable quantities: and others assert, that it impairs the appetite, weakens digestion, produces flatulencies, and generates gripes and dysenteries. It is also said to lay a foundation for the piles; and some foreign physicians have ascribed the frequent consumptions in England to the copious use of sugar. Whilst some assert that sugar generates worms, others are as positive that it destroys them. It is generally agreed however, that the common coarse sugars foul the cutaneous glands, and excite scorbutic spots and blotches. Rotten teeth are often the consequence of using sugar too copiously, and those who do so are likewise said to be liable to fevers. It is farther to be observed, that sugar in some degree differs in medicinal virtues according to its degree of fineness; the moscovado, or that first procured from the cane, being more relaxing and purgative than the finer sugars. Loaf-sugar is said to animate the blood, to cut phlegm, and promote expectoration. Sugar-candy is most proper in colds, as it melts slowly in the mouth, and thereby gives time for the saliva to mix with it, and thus to blunt the acrimony of the phlegm.

THE culture and management of indigo was formerly a very considerable and profitable business in Jamaica, where the plant grew in greater plenty than in any other of our colonies; insomuch that (according to the account of a gentleman who resided a good while in that island) the profits of the planters of it in the parish of Vere, where it was chiefly cultivated, were so great, that there used to be three hundred gentlemen's coaches at the

parish-church on a Sunday. But whether it be owing to the want of seasons, or to the high duties laid on that commodity, (which the planters say was the case) at present there is not a stalk of indigo to be found in that parish, nor any other vestiges of it's former prosperity. The duty laid by our legislature on indigo was three shillings and six-pence a pound, which could be borne when a pound weight of it was worth ten shillings, but on it's falling to four shillings was insupportable. We became sensible of this too late, and took off all duty upon indigo of our own growth; and there have been some attempts of late to revive this manufacture in Jamaica, but without success, the people there having lost the art. Indeed, in the year 1743, Mr. Macfarlan made a small quantity of very good indigo in the parish of St. Thomas in the vale; but we cannot learn whether he has since prosecuted his design. However, it is pretty certain, that much of the indigo at present imported from our sugar colonies is the produce of the neighbouring French and Spanish plantations.

THE cacao-tree, of which there are many walks or plantations in Jamaica, has been abundantly spoken of already; and therefore we need say no more of it here, but proceed to the description of the tree that produces the aromatic spice called pimento or Jamaica pepper, which grows plentifully on the hilly parts of that island. According to Sir Hans Sloane, the trunk of this tree is as thick as a man's thigh, rising straight up to the height of about thirty feet, covered with a very smooth skin of a grey colour, and branching out on every side. The ends of the twigs are set with leaves of several sizes, the largest being four or five inches long, and two or three inches broad in the middle, from whence they decrease towards each extremity. They

They are smooth, thin, and shining, of a deep green colour, without any incisures, and stand on long foot-stalks. When bruised, they are very fragrant, and in all things resemble the leaves of a bay-tree*. The extremities of the twigs are branched into bunches of flowers, each stalk sustaining a flower bending back, within which are many stamina of a pale green. These are succeeded by bunches of crowned berries, greenish when small, but bigger than juniper berries when ripe, and, like them black, smooth, and shining. They contain a moist, green, biting pulp, and two large seeds separated by a membrane, each of which is hemispherical, and both together form a globe. These trees flower in June, July, and August, but sooner or later according to their situation, and the different season for rain; and, after they flower, the fruit soon ripens. Where these trees grow, they are generally left standing when other trees are felled, and are sometimes planted where they never grew, on account of the great profit from the cured fruit, which is yearly exported in large quantities to Europe. The curing and preserving this fruit for use is attended with no great difficulty, being usually done by the Negroes, who climb the trees, and pull off the twigs with the unripe green fruit, which they carefully separate from the leaves and ripe berries, and then expose them to the sun for several days, spreading them thin on cloths, and turning them

* Mr. Smith says the leaves of the Jamaica pepper-tree can scarce be distinguished from bay-leaves, only they are of a much stronger aromatic smell. In Nevis, and we suppose in other islands where it grows, they adorn their churches with small boughs of it at Christmas, the fruit being green upon them, just as we do our churches in England with holly and ivy at that sacred season.

at intervals, taking care to keep them from the dews, which are very great in Jamaica. By this means they become dry and shrivelled, and from a green change to a brown colour, and then they are fit for the market. They are of different sizes, but generally of the bigness of black pepper; and, having a peculiar mixed taste and smell, somewhat resembling cloves, juniper-berries, cinnamon, and pepper, they have obtained the name of all-spice. The smallest and most fragrant are accounted the best.—This fruit is the most temperate, mild, and innocent of all common spices, and preferable to all the East-India commodities of this kind, which it far surpasses in promoting digestion, attenuating viscidities, moderately heating and strengthening the stomach, expelling wind, and doing those friendly offices to the bowels which we generally expect from spices. It is usually sold by the druggists for carpobalsamum, but it is not that fruit, and seems more fragrant, and less astringent and balsamic.

THE same learned author, from whom we have taken the preceding account of the Jamaica pepper-tree, describes likewise the wild cinnamon-tree, which grows in that island, and whose bark is commonly sold in the shops for cortex Winteranus, the bark of a tree so denominated from captain Winter who brought it from the streights of Magellan in his voyage with Sir Francis Drake. However, though these are barks of different sorts, and by their outward appearance seem quite different from each other, yet the one may be used as a succedaneum to the other, though the true cortex is much to be valued beyond the false, being far more aromatic.—The trunk of the wild cinnamon-tree is about the thickness of the Jamaica pepper-tree, and rises to the height of twenty or thirty feet, having a lovely top, with many branches and twigs hanging

hanging downwards. It has an outer and an inner bark, the former whereof is of an aromatic taste, as thin as a shilling, of a grey colour, with some white spots here and there upon it, and several shallow furrows of a darker colour running variously through it. The internal bark is as thick as a crown piece, smooth, of a whiter colour than the external, and of a much more biting and aromatic taste, something like that of cloves, and not glutinous like cinnamon, but dry and crumbling between the teeth. The leaves grow on foot-stalks an inch long, coming out near the ends of the twigs without any order. They are two inches long, and one broad near the end, where they are roundish, being narrow at the beginning, and increasing in breadth almost to the extremity. They are of a yellowish-green colour, smooth and shining, without any incisures about the edges, and somewhat resemble the leaves of bay. The extremities of the twigs are branched out into large bunches of flowers, each having a foot-stalk, and a calix at the top made up of little leaves, wherein stand five scarlet or purple petala. These flowers are succeeded by many caliculated berries, the size of a large pea, being roughish and green, and containing within them a mucilaginous thin pulp, and four black shining seeds, of an irregular figure. All the parts of this tree, when fresh, are very hot, aromatic, and biting to the taste, like cloves; and it grows on the low lands, or savannah woods, and very frequently on each side of the road between Passage Fort and the town of St. Jago de la Vega, as also in Antegua and the other Caribbee islands. The bark of this tree is much in use both in the English plantations and in Europe; and it is easily cured, being only cut off and dried in the shade. The common sort of

people use it in the West-Indies instead of all other spices, it being thought good to correct the immoderate humidities of the stomach, to help digestion, expel wind, &c. It is there, as well as in Europe, thought to be a very good remedy against the scurvy, and to cleanse and invigorate the blood, being used for those purposes by druggists and apothecaries under the name of the cortex Winteranus, which (as before observed) it is not, though it may very well supply it's place. In the West-Indies it is mixed and given with steel and other medicines; but Sir Hans says, if the patient be of a hot constitution, it does more harm than good, being of a warm nature. If rum be mixed with this bark, it loses much of it's disagreeable smell; and, if it be mixed with water, and distilled per vesicam, it yields an aromatic oil, sinking to the bottom of the water like oil of cloves.

THE same learned physician and naturalist observes, that in Jamaica and the neighbouring islands, as well as on the continent of America, there grow several sorts of mistletoe, to which the doctor gives the name of viscum, with an epithet to distinguish the various species. One of this family he calls viscum caryophyllioides, from having it's seed-vessel somewhat like that of a clove july-flower. The branches of this plant are encompassed with many brown small fibres, which take firm hold of the bark of the trees whereon it grows; not indeed like mistletoe, which penetrates into the bark or wood whereon it grows, but only interwoven and matted together, so as to afford the plant a firm support. From the leaves, which grow in the manner of leeks, it has obtained the name of wild pine or aloes. Each of them is two feet and a half long, three inches broad at bottom, and terminating in a point, having their insides concave,
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so as to be capable of containing a pretty deal of water, which in the rainy seasons falls upon the uppermost parts of the spreading leaves, and is thence conveyed by natural channels into the reservoir. The leaves, after they are swelled out like a bulbous root to form this basin or cistern, bend inwards, or come again close to the stalk, whereby they hinder the evaporation of the water by the heat of the sun. Below they are of a light green colour, and like leeks above; and from the middle of them rises a round, smooth, strait stalk, three or four feet long, that has several branches, and by incision yields a clear mucilaginous gum. The water, thus received in the cavities of the leaves, is not only necessary for the nourishment and life of the plant, but likewise very useful to men, birds, &c. who resort to it to quench their thirst, and seldom go away without refreshment. This vegetable grows on the arms or trunks of trees, especially when they begin to decay, the bark being then more disposed to receive the seed, and yielding more easily to the fibrils of the root of the plant.—But what is particularly surprising in this plant is the contrivance of its seeds, which are oblong, pyramidal, and very small, covered with very soft hair or down, that they may be carried by the wind like the tomentous seeds of *hieracium*, *lysimachia*, &c. and the more readily stick to the branches and prominent parts of the bark of trees. As soon as it sprouts or germinates, though it be on the under part of a bough, its leaves and stalk rise perpendicularly; for, if it had any other position, the reservoir before mentioned, made by the hollow leaves, could not be found, nor hold the water so necessary for the life and nourishment of the plant, and so useful to men, birds, and insects.

THE water-with of Jamaica is likewise very serviceable on the same account; for Sir Hans (as quoted by Dr. Derham) informs us, that it grows on dry hills, and in the woods, where no water is to be met with; and it's trunk, if cut into pieces, and held by either end to the mouth, affords so plentifully a limpid, innocent, and refreshing water, as gives new life to the thirsty traveller or hunter: so that the inhabitants of Jamaica, and the other islands where it grows, look upon it as an immediate gift of Providence, to relieve them in their distress.

SIR Hans observes farther, that there are several plants in Europe which in some particulars resemble the viscum above described. Thus, says he, the *virga pastoris*, or wild teasel, has leaves inclosing it's stalk, and so set by pairs opposite to each other, and joined by their basis, that they form a cavity fit to contain water, which undoubtedly contributes to the perfecting of the plant. Several fuci have been discovered to have seeds, which, when ripe, break out of their places, and by means of a glutinous juice fasten themselves to stones or other substances at the bottom of the sea where they are to grow. The common viscum has such a glutinous matter for fastening it's seeds to the bark of trees; and small mosses, heretofore thought to have no seed, are now known to have it in great plenty, but so very minute, that the doctor saw it rise from the ripe head in the form of smoke, which undoubtedly is designed that the seed may be carried to walls, trees, and other fit places for it's vegetation. Sir Hans farther observes, that there are many species of plants with pappous or tomentous seeds, which, when ripe, are conveyed by the wind to places proper for their reception. A remarkable instance of this kind is the *after canadensis*, which, though brought originally from
Canada,

Canada, is now become a wild plant in many parts of Europe, the seed having been carried by it's wings or feathers to a great distance from the gardens wherein it was first planted. There are likewise many plants (continues our author) with feed-vessels so contrived, that they throw off the seed with a spring, and sometimes a brisk noise, to a considerable distance. Most plants that have pods, as furze, crane's-bill, &c. have this mechanism in order to sow themselves; and amongst these none is more surprising than a plant in Jamaica called spirit-weed, whose seed-vessel, when the seed is ripe, opens itself instantly upon the least touch of any thing that is wet, and with a noise throws the seed several ways; the design of nature being, as the doctor reasonably supposes, to keep the seed in it's vessel, the best preserver of it from injuries, till the rainy season comes on, which is proper for sowing. The lychnis, poppy, &c. have their seeds in heads, which, being open at top when they are ripe, by their structure and the winds are scattered and directed to all quarters.—These and many other instances, very wonderful and obvious, though not taken notice of, shew the great endeavours of nature to propagate the species, every one of which, the doctor thinks, has been preserved to us from the creation to this day.

IN Jamaica they have three sorts of cotton-trees, one of which creeps like a vine, the second is thick like a bushy dwarf-tree, and the third is as tall as an oak; which last indeed is of no use in the cotton manufacture, but is of very quick growth, and so thick that they are very frequently scooped into canoes. The creeping sort we have already taken notice of; and, as for the second, after producing many beautiful flowers, it is loaded

with a fruit as large as a walnut, whose outward coat is quite black. It bears pods five inches long, which, when full ripe, open and discover a down extremely fine and white, which is the cotton. The people gather it as soon as it cracks, and it's seeds are separated from it by a mill, as heretofore observed. The bark of the tree is brownish, the leaves small, and divided into three parts; and it bears a flower about the bigness of a rose, consisting of five leaves of a bright yellow colour, which have several purple streaks towards the stem, and a yellow button or crown, surrounded with fibres of the same colour.

GINGER is another root that is cultivated in Jamaica, shooting forth blades in shape like those of wheat; and, when it is ripe, the roots are dug up and scraped by the Negroes, to clear it of it's outer skin, and kill the spirit, or else it would be always growing. If they have not hands enough to scrape it, they are forced to scald it; but this is sold much cheaper than what is scraped, which is white and soft, whereas the scalded will be as hard as wood.

THE mastich-tree is a very hard timber, that grows to a vast height; and is generally used, like those called iron-wood and bulley-tree, for chariot-wheels and mill-work.—The soap-tree grows chiefly about Spanish-town, bearing berries as big as musket-balls, which, without any other ingredient, is said to wash better than any Castile soap, though in time it rots the linen; but in reality this is no other than that species of the aloe-tree that was lately shewn by Mr. Cowel at Hoxton.

THE manchineel-tree is like our English dwarf apple-tree, but it's leaves resemble those of the pear-tree in colour, shape, and bigness. The fruit

fruit (according to Mr. Smith) is of the size, shape, and smell of an English crab, and, though fair to the sight, is a very rank poison, from whence some call it the eve-apple. There is a thin glutinous matter about the sides of the leaf; and, if your face happen to touch one of them as you ride along the road, our author says he knows by experience it will raise an immediate blister, which ends in a scab. Break a bough, and there issues out a milk-white water, which is still more poisonous, and the fruit more than that. Mr. Smith adds, that he was credibly informed, that a manchineel-stick, with the bark peeled off and brought to London, will, if one end of it be put into a pail of new milk, and stirred half a dozen times round, immediately turn the whole into curds and whey; so powerful is the strength of its poison, even at such a distance of time!

THE Rev. Mr. Hughes observes, that, though the juice of this tree is one of the strongest poisons yet discovered, its effects have been greatly exaggerated; for it has been pretended, that the heads of those who sleep under its shade swell, and they become blind; that, if the leaves do but touch the naked skin, they raise pustules, attended with violent pains, which prove mortal, unless helped with water and salt, or fasting spittle; but this is not true, nor is any ill consequence to be feared from the leaves touching the naked body unless they are bruised; and the white milky juice they contain is suffered to pervade the pores, which, if it does, it raises blisters like those of the confluent kind in the small-pox, causing acute pains; but simple drops of rain-water, falling from the leaves upon the skin, have no ill effect, as Mr. Hughes himself has frequently experienced. The tree is of a very quick growth, and is seldom found growing

growing to any perfection, but in a loose and sandy soil, near the sea or other water. The trunk, when full grown, is generally from two feet and a half to three feet in diameter, branching most commonly from three to fifteen feet high from the ground. The timber is remarkable for its beauty; the heart, which is very small in proportion to the bulk of the tree, is hard and solid, of a pale yellow, with a greenish cast, interspersed with small blackish veins, and the wood durable: the bark is of a sleek, whitish grey, the branches many, and covered with thick, smooth, shining leaves, among which are long pendulous catkins. It bears a fruit resembling, in its form, the round sort of crab-apple we have in England, of a beautiful colour, and fragrant smell. Yet the pulp does not exceed one-seventh of an inch in depth, the inside being a hard, stony kernel, in which are included the seeds. The juice of the apple is of the same colour and quality as that of the leaves; and yet Mr. Hughes says he has known a woman big with child, who longed for them, eat of them without any apparent bad effect; but that he cannot say, the fragrance of the smell, or the tempting looks of the fruit, have induced others to follow her example, by so dangerous an experiment. Yet, if some of this crude, milky juice, only falls upon a horse, the hair of the part affected soon falls off, and the skin rises up in blisters that will require a long time to heal. Formerly no one dared to cut down these trees, without first making a large fire round them, in order to burn the bark, and dry up the spry and juices that fly from them in cutting; but now Negroes, entirely naked, venture to cut them down, only first rubbing their whole bodies with lime-juice, which prevents the sap from corroding or ulcerating the skin.

skin. Our author adds, that it is a remarkable instance of the goodness of God, that, wherever a manchineel-tree grows, there is always found a white-wood, or a fig-tree near it, the juice of either of which is an infallible antidote against the poison; salt-water is no less efficacious; and as these trees grow by the sea side, this remedy is likewise near at hand.

As to the animals of Jamaica, there are few colonies so well stored with cattle as this. Their horses, asses, and mules are cheap, their cows and oxen large, and there would be much greater numbers of black cattle, but that the English mind planting more than grazing, which has so lessened their stock of cattle, that they are supplied with flesh from the northern colonies, and some of the neighbouring islands. Their sheep are generally large and fat, and the flesh good; but the wool, being long and hairy, is good for nothing. Goats they have in abundance, and hogs, whose flesh is very good; but they have no deer nor hares. They have all sorts of fowl, both tame and wild; and more parrots than in any of the other islands. Pigeons, snipes, turkeys, geese, ducks, &c. are very common in Jamaica; and they have the pelican, a description of which we have formerly given from Sir George Wheeler. This bird lives upon small fish it picks out of the sea, and roosts at night on high rocks, sitting with it's head towards the wind. It has a very long neck, covered with hair instead of feathers on the upper part, and below it has two membranous bags or ventricles, stretching to the extremity of it's under bill, wherein it reserves it's prey when gorged with eating, or what is intended as food for it's young. It appears slow and heavy in flight, but has a piercing eye to discern the little fry on which it subsists,

subsists, and on which it falls down from a considerable height in the air, and catches them either on the surface of the water or by diving. The flesh of it has a fishy taste, which it loses by being covered two or three hours with earth.

THOUGH we have already spoken of the tortoise or turtle-fish, it seems proper to add, that the coasts and rivers of Jamaica abound with the most delicious kind, which are esteemed one of the nicest dainties at the tables of our gentry and merchants. They are chiefly found about twenty leagues from point Negril, near the Cayman islands, to which all the tortoises, from the Caribbees to the bay of Mexico, repair every summer to lay and hatch their eggs. It is said they float asleep in a calm day on the surface of the water, and the seamen row to them gently, and either take them by striking them with irons, or insnaring their legs with a rope and running-net.—Dr. Stubbs, who communicated an account of this animal to the Royal Society, says it's blood is colder than any water he ever felt in Jamaica, and yet it's heart beats as strongly, and it's arteries are as firm as any creature he ever knew. If their blood at any time be hotter than the element they move in, they die. They have a sort of teeth, with which they bite much more of the submarine grass than they swallow, so that the surface of the water where they feed is sometimes covered with what they loosen from the bottom. If they are hurt on shore, by throwing them on their backs, or otherwise, they are observed to shed tears; and the head being cut off, they die instantly. When the tortoises come upon the above-mentioned coast to lay their eggs, they continue their intimacy so long, that the male is reduced to a kind of jelly within, and is at length carried home by the female.

THE mountains of Jamaica breed numberless adders and other noxious animals, as the fens and marshes do the guana and galliwasps; but these last are not venomous. Of all the insects produced in that island there is none so mischievous as the ciron or chegoe, which eats into the flesh of the Negroes, sometimes making their toes bare to the very bone.

THERE are in Jamaica a sort of flies called fire-flies, on account of their contracting and expanding their light as they fly. In the day-time they look green, but glow and shine in the night, and do so even some days after they are dead. By a few of them, it is said, one may distinctly read the smallest print, provided they are laid close to the book, and moved from line to line.

WE now proceed to take a view of Barbadoes, one of the chief of the Caribbees, and the most considerable of all the British island-colonies next to Jamaica. The climate here is very hot, especially for eight months in the year; but the heat is not so excessive as in the same latitude on the continent, which may be said of the American islands in general; and it is observable, that, though people in Barbadoes sweat very much, they are not so weakened by it as we are by the heat in England in July and August, nor are they so apt to be thirsty. The length of the day is very near the same all the year round, the sun always rising at six and setting at six, or within half an hour before and after it; but the twilights are so short, that it is presently dark after sun-set.

THE atmosphere is generally serene and clear; and, from the total absence of frost, snow, and hail, it is never liable to the sudden vicissitudes so common in other climates, to the northward and southward of the tropics. The air is, in general, very
healthful,

healthful, which is chiefly owing to it's having neither bogs nor marshes of stagnated waters, nor large forests, which generate a moist air. It sometimes happens here, that large pieces of ground, planted with sugar-canes, and even with plantain and banana trees, have slid down to the vallies, from the sides of the hills. This happens in very rainy seasons ; for, the soil upon those hills being frequently not above eight or nine inches deep, and of an oozy and soapy nature underneath, it easily separates from the next immediate substratum, which is of a slippery chalk, flat stones, or loose gravel. When the soil slides in large pieces, it's motion is less violent than when it is confined in narrow chasms, in the meeting of two hills, where, the collection of the water being considerable and heavy, instead of gliding softly between the two strata, it breaks out in different places at once ; and then runs down the precipice, a mingled torrent of earth and water. This island abounds with caves, some of which are of great extent, with the top crowded with innumerable petrified isicles.

AMONG the fossils, the most remarkable is an oily bituminous exudation, of a dirty black, inclining to a green. It is procured by digging a hole or trench near the places where it oozes out of the earth ; this, by degrees, fills with water, that has a thick film or cream of this liquid bitumen swimming on the surface, from whence it is skimmed off, and preserved in earthen jars, or other vessels. It is of so inflammable a nature, that it serves to burn in lamps ; and is also used with great success both in the cure of cutaneous eruptions, and in paralytic and nervous disorders. In St. George's parish are frequently dug up lumps of a transparent, resinous substance, resembling
resin,

refin, from which it is principally distinguished by the fragrance of it's smell; and, on comparing it with the gum produced by the birch gum-tree, one would think it of the same species. There is another species of bitumen, of a solid substance, here called munjac: this is dug out of the earth on the sides of several hills, and nearly resembles the bitumen found in the Dead sea, of which we have already given a description. If by accident any of these veins take fire, they continue burning a long time, though in a slow, dull manner; for, the veins being surrounded with earth, it crumbles, and damps the flame into which it falls.

EXCEPTING that of Bridge-town in Carlisle-bay, there is scarce a harbour in the island, nor a stream that deserves the name of a river; but they have wells of good water almost all over the island, without digging very deep for it; and likewise large ponds and reservoirs for rain-water. For the most part it is a plain level country, with some small hills; and it's woods have been cut down to make room for plantations of sugar-canes, which now take up almost the whole island, and render it the most valuable colony, for it's size, that Great Britain ever possessed. As to the cultivation the cane and the manufacture of sugar, we refer the reader to what has been already said in treating of Jamaica.

THE trees in Barbadoes, as well as in the neighbouring islands, are perpetually bearing fruit or blossoms; so that at the same time one may see the blooming beauties of the spring, and the mature glories of the summer. Here are all sorts of oranges and lemons, sweet, sour, and seville in abundance, which last are large, and their juice delicious. The fragrancy of the juice is as remarkable as the beauty and size of the fruit; and the

the weight of the citrons often bend the branches of the tree to the ground. With the rind or peel of citrons the ladies of Barbadoes make the finest cordials and sweetmeats ; and indeed they are generally allowed to excel the English in the art of conserving, having the advantage of the finest sugar and fruits, with abundance of choice roots, &c. that are both wholesome and agreeable to the palate.

THE lime-trees in Barbadoes are as prickly as our holly-bush, and they were formerly used by the planters for hedges. The tree grows seven or eight feet high, full of leaves and fruit, which so much resemble a lemon, that they are hardly to be distinguished at a little distance. Since punch has been a fashionable liquor in England, some tuns of lime juice have been annually imported to our island. China limes are also frequent there, also China or sweet lemons, of which the latter are of most use and value. The tamarind and palm-tree are not natives of Barbadoes, but were brought thither eighty or ninety years ago. Here are also fine pine-apples, which we have heretofore described ; with aloes, mangroves, calabashes, cotton-trees, bulley-trees, mastich-trees, cedars, cacao-trees, and other vegetables already spoken of sufficiently.

THERE are some plants however, that grow in Barbadoes, which deserve a little more particular notice ; as the fig-tree, which has a trunk about as big as an elm, though the fruit is less than a cherry, insipid, and little regarded. The trunk shoots out beards or fibres, which take root in the ground ; and, if suffered to grow, would become a grove ; from whence we are apt to imagine it is the same as the banian-tree mentioned in the East-Indies.

THE cassia fistula, which has been heretofore described, is also common in Barbadoes, and is a
tree

tree of such quick growth, that it has been known to rise eight feet in a year's time. This, according to Mr. Smith, is a strait-bodied tree, thirty feet high, with spreading branches, from which hang the pods, which are about twelve inches long, and of a dark brown colour.—The plantain-tree is also remarkable for its swift growth, and three or four roots shoot from one root; but there is a wild sort, which is of a scarlet colour, and the fruit good for nothing. A tree also grows in this island, that bears large yellow plums, which, being steeped twenty-four hours in water, and then strained, make a good drink.—Guana-trees, which yield a wholesome fruit, and soap-berries, about the bigness of a floe, grow likewise in great plenty.

THE guava is a tree common enough in Barbadoes and the neighbouring islands, as well as the continent, somewhat resembling a cherry-tree, and bearing a fruit of the size of a small lemon, which has a soft but thick rind, and is of a delicate flavour. The rind incloses a pulpy substance, which is not unlike a quince, and makes the best jelly and marmalade that can be imagined. What is remarkable of this tree, it has been known to bear fruit when not above six inches out of the ground, though it grows to the height of eighteen or twenty feet.

THE custard-apple, which grows on a tree of a fine clear red colour, is eaten by the servants and slaves, being kept a day after gathering, when they take out the pulp, which is like a custard, with a spoon.—The pomegranate has small leaves of an olive green, and grows in Barbadoes, but the fruit is not so large as in the southern parts of Europe.—The prickled apple-tree bears a fruit shaped like a heart, which is of a pale green colour, and tastes like a musty lemon.

ONE of the most singular trees is the cabbage-tree, by some authors called the palmeto-royal, it exceeding all the other trees in height, beauty, and proportion. The trunk, says Mr. Hughes, bulges out a little near the ground, which gives it the becoming appearance of a substantial basis, to support it's towering height. It is generally as straight as an arrow, and scarce can any pillar be more regular, especially when it is of about thirty years growth. It, in this island, rises above an hundred feet in height, and the trunk near the earth is then about six or seven feet in circumference, the whole body growing tapering to the top. The colour of the bark is like that of the ash-tree, and is faintly clouded, at the distance of every four or five inches, with the marks of the fallen off branches: this colour of the bark continues till within about twenty-five or thirty feet of the extremity, where it changes, at once, from an ash colour to a beautiful sea-green, and this continues to the top. About five feet above the beginning of the green part, the trunk is incircled with it's numerous branches, all the lowermost spreading horizontally with great regularity; and the extremities of many of the higher branches bend weaving downwards, like plumes of feathers. These branches, when full grown, are about twenty feet long, and are thick set on the trunk, rising gradually above each other; and the top is terminated by a beautiful upright, green, conic spire. These branches have a great number of green pointed leaves, some of them near three feet long, and an inch and a half broad, but gradually decreasing in length, towards the extremities of the branches. It is observed that the lowermost branch drops monthly from the tree, carrying with it an exfoliated circular lamen of the green part of the tree, from the setting on
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of the branches, to the ash-coloured part. This, and the branch, to which it is always fixed, fall together. When the loss of this lower branch happens, the green conic spire, which issues from the center of the uppermost branches, and rises superior to all, bursts and throws, from it's side, a young branch, which continues the uppermost, till another of the lowermost branches drops off; and then the spire sends forth again another branch, superior in situation to the last; and thus the loss of the branches below is supplied by those above. The inside texture of the leaves consists of many longitudinal threads like filaments, which, being spun, are used in making cordage of every kind, and also fishing-nets. What is called the cabbage lies in many thin, white, brittle flakes, which have something of the taste of almonds; and, when boiled, is sweeter and more agreeable, than the best cabbage.

THE locust-tree, whose timber is used in wind-mills and other buildings, grows likewise in Barbadoes, just in the form of a Tuscan pillar, being less and less all the way from the bottom to the top.—Iron-wood, which we have frequently mentioned already, so called from it's weight and hardness, is of a dark-red colour, and blossoms both in March and September. Here are also red-wood, prickled yellow-wood and *lignum-vitæ*.

GINGER is common enough in Barbadoes, and red pepper of two sorts, one of them called ben-net, and both very hot and strong-scented.—They have grapes, but not so good as on the continent. Their cucumbers and melons are very large and fine, and especially their water-melons are extremely refreshing, and reckoned good for the stone.—The sensible plant, the humble plant, and the dumb cane, are also frequent in this island, with

with many other vegetables brought hither originally from England.

BESIDES the Damask and Provence roses, which they have all the year round, they have divers sorts of beautiful flowers, particularly that called the St. Jago flower, the smell of which however is very disagreeable. — The passion-tree, whose blossom is here called the vinegar pear-flower, creeps along the ground like ivy; or else, with the water lemon-flower, is turned over arbors like our honey-suckles. — The flower, called in England the merveille de Peru, goes in Barbadoes by the name of the four-o'clock flower, because it opens in the evening. The flower is larger than a primrose, of the finest purple colour, and the seed is black, with an eye of purple. — There is a sort of cabbage in this island, called the seven-years cabbage, which is much sweeter than ours, and shoots out many slips that produce others when transplanted. — There is likewise plenty of excellent pulse; but the European apples, pears, cherries, gooseberries, and our other shrub-fruits, do not thrive well. Of their potatoes they make a brisk small-beer called mobby.

As to their birds, the largest is the buzzard, less and swifter than our grey buzzard, and a great destroyer of rats. They have a large sort of turtle-doves, but the lesser is the finest, being shaped like a partridge, with grey, red, and brown feathers. — The humming-bird, already described, is common in this island; but their chief singing bird is a kind of thrush, which hangs down its head, and its feathers are always ruffled. There is likewise another sort called the quaking thrush, somewhat like a wren, with a long bill, but it seldom or never sings. — Another bird, called a black-bird, has white eyes, a note almost like a jay,

jay, and feeds chiefly on corn and blossoms. These fly together in great flocks; and there is another sort in colour like a fieldfare, with a large head, and therefore called a counsellor or logger-head. It is extremely wanton in its flight, and has such a strange note as is not to be imitated either by voice or instrument. They have a sort of fowl called oxen and kine, and men of war birds, which fly twenty or thirty leagues from land, and return (as is said) when they spy a sail.

SOME authors say there are snakes in Barbadoes about a yard long, which will climb the walls of a dairy, enter the windows, skim the milk, and so return back again, but never bite any body.—The most offensive insect in the island is the cockroach, which (as described by Mr. Smith) is a large, long, stinking fly, of a chocolate hue, that lays a long egg of a brown dusky colour, quite flat at each end, so that it looks like a bit of a small stick. This egg is glutinous, and will stick to any thing, where it remains till the heat of the weather produces the young; and the singularity of it lies in its numerous brood, one single egg affording above twenty flies. An acquaintance of our author's put one into a glass phial, and kept it there till it produced thirty young ones, which were of a whitish colour. This fly does not bite like a gnat, but lights upon any part of you in the evening, at which time it is particularly troublesome.—There is also an insect called merry-wings, much like our gnats; and that mischievous one called a chego, as well as various sorts of ants, especially wood-ants, which destroy the timber in houses. These ants are white, and, when squeezed, there issues a soft matter of the same colour.—The massich fly, so

called from it's living upon the ~~massich~~-tree, is said to be so fragrant as to perfume the air, as it flies along. It is supposed to destroy the tree by a sort of rasp in it's bill, with which it makes thousands of holes, and leaves the wood it consumes under the tree like saw-dust.

THE neighbouring sea abounds with most sorts of fish, besides the green turtle, which is extremely delicious.—The parrot-fish, when come to maturity, will weigh twenty pounds, is well-tasted, and has scales like a carp; he is of a green colour, has sharp strong jaws, but no teeth, and feeds chiefly on other fish.—The land crabs, though not peculiar to Barbadoes, but found in most of the neighbouring islands, may as well be described here, since they are common in that country. Mr. Smith, who speaks of them in Nevis, says they live high up in the woods on the mountains, and make small burrows in the ground like rabbits; that their flesh is delicious eating, and their shells of a blood-red colour when boiled, but in other respects no ways curious. They annually travel down to the sea, in order to wash and shed their shells*, at which season they are easily caught, by the help of torches in the night, which is the time of their travelling. Their bodies (says our author) are much less than those of our European sea-crabs; and nature has supplied them with claws, which, though long and slender, enable them to lift up their bodies well, and to travel apace.—Other writers tell us, that these crabs live in the holes of houses or hollow trees, eat herbs in the gardens, and are often met on the stairs, and in the parlours.

* Compare this account with what is before said of the soldier-crab in this volume.

AFTER Barbadoes we think the island of Nevis deserves our notice, in our account of which we shall chiefly follow the reverend Mr. Smith, whom we have so often quoted already. This island, our author informs us, is called the mother of the English Leeward Caribbee Islands, because, as England is governed by kings, lords, and commons, so they are ruled by a governor, council, and assembly, who can make any law to last for twelve months; but, if they would have it continue in force longer, it must be confirmed by the king's privy-council; in all other cases they are ruled by the common statute-law of England. St. Bartholomew and Anguilla (adds our author) have their respective governors appointed them by the governor-general of Nevis; and pirates are tried at Nevis only, as being the mother island.

THE soil of Nevis, especially in the valleys, is fruitful, but the rising ground is stony, and the plantations therefore the worse, the higher they are towards the summit of the mountain. This mountain, says Mr. Smith, has been measured with a quadrant from the bay at Charles-town, and it is said to be exactly a mile and a half perpendicular, though our author thinks it is not so high, he allows it however to be higher than the mountain called Coal in Norway, or that called Skiddaw in Cumberland.—As to the product of Nevis, it is much the same as in the other Caribbee islands, sugar being it's staple commodity, and exchanged for all other instead of money. Their sugar was formerly for the most part moscovado; but they have since endeavoured to clay it, and had refiners from Barbadoes; however, they have not had much success till within a few years past. Tobacco, cotton, and ginger were once much cultivated in Nevis, but of late little or none; the sugar plan-

tations now so much engrossing the attention of the inhabitants, that fifty or sixty ships have been laden with that commodity in a year for Europe. The island was formerly overspread with purslain, which, says Mr. Smith, was reckoned one of the worst weeds belonging to us at our Bath-plain plantation. The aloes there are intirely neglected.

ON the south-side of St John's parish, of which Mr. Smith was rector, there is a considerable spot of sulphureous ground, at the upper end of a deep rupture in the earth commonly called Sulphurgut, which is so exceeding hot as to be presently felt through the shoe-soals; and, some eggs being buried in it about an inch deep, for the space of three or four minutes, they were as hard in that time as boiling or roasting could have made them.

AT the foot of the declivity adjoining to the south side of Charles-town, there is a little hot river called the bath supposed to flow from the abovementioned sulphureous ground, which is not above three quarters of a mile higher up in the country. This rivulet runs at least half a mile before it loses itself in the sands of the sea; and towards the sea-side there is a particular part of it, where a man may set one foot upon a spring that is excessive cold, and the other upon another spring that is surprisngly hot. All distempered people, both whites and blacks, find great benefit from this hot river; and our author says he knew a Negro boy, who was sent from Barbadoes to Nevis for that purpose, cured of the leprosy by drinking and bathing in it three or four times a day, after having been twice salivated in vain. Mr. Smith himself bathed in it once a fortnight, and owns that it contributed not a little to his health and vivacity; and, the last nine months of his stay in Nevis, it was his custom to walk to the river every morning

ing at sun-rising, and drink a pint of it's water, which he found operated both by stool and urine.

AT another place, a little to the southward of Charles-town, there is a sharp point of land that jets out a considerable way into the sea; on the rocky extremity whereof Mr. Smith stood, whilst a tall Negro slipped down from it into the water, and, taking some sand from the bottom he gave it into our author's hand, who found it to be very warm, the man at the same time affirming that the spring at the bottom was so very hot, that he could scarce bear to set his foot upon it.—The water of Black-rock pond, about a quarter of a mile from Charles-town, is milk-warm, occasioned undoubtedly by a mixture of such hot and cold springs; and yet it yields several sorts of excellent fish, and perhaps the best eels in the world, for they have not the least rank taste, and are therefore very much admired. The silver fish, found in this pond, is about eight inches long, has a bright body, and tastes much like an English whiting; and here is also the slim-gut, in length from ten to about twenty inches, which eats like our gudgeons, and is not unlike them in colour.

OUR author farther informs us, that they have a good spring and a short stream at Nevis, which afford them mud-fishes, generally reckoned the richest fish they have; but, for his part, he always thought the cavally, a sea-fish, the finest eating of any. This last is a very firm fish, weighs four or five pounds, and tastes not unlike a mackarel.—They have likewise a peculiar sort of cockles, which are delicious at the full of the moon, and increase and decrease in bulk as well as goodness, just as that luminary seems to increase or decrease to our sight. The shells are of a triangular form, but not equilaterally so, two sides of them
K 3 being

being each as long again as the short side; and all the three angles are rounded off or blunted. They are of a bright shining colour, like well-polished white marble, and are generally streaked very regularly with beautiful red or blue veins. The manner of taking them is this: a Negro goes into one of the sandy bays up to his knees, where stooping down he takes up a basket of sand from the bottom, which he dips into the water till the sand is washed away, and the cockles are left behind.—It is remarkable, that this sort of cockle is not to be found, as far as Mr. Smith could learn, at any other of the Leeward Caribbee islands; nay, they have been carried to St. Christopher's, and would not propagate there, though the nearest end of that island is within four or five miles of Nevis.

A METHOD of fishing, or rather fish-hunting, practised in Nevis, and described by our author, seems worthy our observation. When seven or eight gentlemen have an inclination for this diversion, they send their slaves to the woods to get some of the bark that grows upon the roots of a tree called dog-wood, which is next morning pounded very small, put into sacks, and carried to the rocky part of the coast, where it is steeped till it be thoroughly soaked with the salt water, and then well squeezed by the Negroes to get out the juice. This juice presently stains the sea with a reddish hue, and, being of a poisonous nature, will in an hour's time make the fishes, such as old wives, rock-fish, welchmen, &c. so intoxicated as to swim on the surface of the water quite heedless of danger; when the Negroes pursue them, and either take them by swimming or diving after them, their masters standing on the rocks to see the pastime.—This poison, Mr. Smith observes,
kills

kills millions of the small fry; and he imagines it must likewise destroy the shell-fish that lie at the bottom, and are less qualified to escape its effects by moving into purer water. Besides, as they naturally die every year in considerable numbers, it is no wonder that in the hurricane months their shells are cast up in abundance on the rocky shore of the island. That they are so cast up is certain, but Mr. Smith acquaints us, that their colours are not bright or beautiful, till they have lain for some time upon the shore to be dried and polished by the heat of the sun, which scorches off such moss or filth as at first sticks about them, and hinders the eye from perceiving those inimitable strokes of nature's pencil with which they are adorned.

AFTER having mentioned several beautiful shells, of which he sent specimens to England, Mr. Smith gives us another remarkable particular relating to the productions of the sea about Nevis. The lobsters there, says he, exactly resemble the English ones in size, colour, and shape, except that their two large claws are not so big in proportion to their bodies; but he had like to have lost his life by one circumstance attending them, which is this: such of them, it seems, as are found on the western side of the island are reckoned fine eating, but those taken on the eastern are poisonous, which is attributed to some unwholesome sort of food they meet with there, by some imagined to be veins of copperas. This poison, as our author experienced, works by dreadful stools and vomits.

WE have not yet taken notice of the porpus, a fish common enough in the European seas, but very different, according to Mr. Smith, from those found in the American. In his voyage towards the Caribbee islands, he says they were more than once

purfued by millions of porpuffes, which fwam along by the fhip like an arrow out of a bow, though they were then under a brisk gale of wind. They were at leaft two hours in paffing by after that manner, the fea being covered with them as far as the eye could difcern. They jumped up every moment, fhewing almoft their whole bodies. Moft of them were five or fix feet long, having a head fhaped pretty much like a hog's, and in colour were not unlike our Englifh minnows.—A day or two after our author obferved fome of them with nofes exactly formed like quart glafs-bottles, and full as large; on which account they are not improperly called bottle-noses; but thefe are much bigger than the others, and differ ftangely from thofe found upon the Britifh coafts.

THE fheep of Nevis have neither horns nor wool, being hairy and fmoth fkinne'd, and generally full of red or black fpo'ts, refembling thofe of a fine fpaniel. They breed twice a year, if not oftener; bring ufually two, three, or four lambs at a time; and, what is more extraordinary, fuckle them all. The rams are of a pale red colour, with a thick row of long ftrait hair hanging down under their throat, from their lower jaw to their fore legs. They have likewise plenty of goats, which, as well as the fheep, are very prolific.—Their porkers, being fed with Indian corn, Spanifh potatoes, and fugar-cane juice during the crop-time, are very white and excellent food; their fowls, efpecially their turkeys, of which they have great plenty, are the fame; their veal is fmall, fat, and white; but their beef, (adds our author) the principal fupport of an Englifhman's life, is lean and tough.

AT Nevis, it feems, they have excellent game-cocks, and fierce bull-dogs, notwithstanding the
vulgar

vulgar notion that they degenerate out of England. They have also cur-dogs; but no hounds nor spaniels, there being no game for them in that island. Some of the Negroes, Mr. Smith observes, eat dog's-flesh; in which case the dogs, both of the bull and cur breed, are apt to fly outrageously at them; and the people there imagine they know them to be dog-eaters, by some particular scent.—What he adds is very remarkable, viz. that he never once heard of a dog's running mad at Nevis, (notwithstanding the heat of the climate) as they too frequently do here in England.

THE most usual birds at Nevis are a small kind of screech-owls, noddies, spoon-bills, pelicans, pigeons, wild and tame, and ground-doves, which last are about the bigness of a lark, of a chocolate-colour, spotted with a dark blue. Their heads are like that of a robin red-breast, and their eyes and legs are of a fine red.—They have likewise a few birds called mountain-thrushes, which are very fat, and resemble the English ones; and at one season of the year they are visited by a few swallows.

As to animals of the lizard kind, Mr. Smith particularly takes notice of the guana, though he never saw above three or four of them during his stay at Nevis; which scarcity he imagines may be in some measure occasioned by their flesh making excellent broth, and tasting deliciously, as he was credibly informed. From the nose to the end of the tail they are about a yard long, of the shape of a lizard, but walk far more upright upon their legs, and their eye (if possible) exceeds the lizard's in beauty. They are all over covered with scaly spots, each as broad as a silver-penny, some of a deep black, and others of a most perfect yellow. They are very harmless creatures, even to a proverb.

LIZARDS are very numerous in Nevis, from three inches to a foot in length; but they are too well known to require a particular description: There is a strange circumstance however, mentioned by Mr. Smith, relating to a musical noise supposed to be made by the united voices of lizards, guanas, snakes, grasshoppers, &c. which we believe the reader will not be displeased to have an account of. As soon as day-light is well shut in, says he, the said soft and agreeable noise begins, to describe which fully and truly he acknowledges he wants words to express his ideas. To give as just a notion of it as the nature of the thing will admit, imagine that in a mild and still summer's night, instead of the croaking of frogs and toads, you hear millions of the softest melodious notes strike up, almost at once, into as high a key as music can possibly rise to; and, though they seem to form no particular tune, yet are sweet and soothing beyond compare. Our author thought the animals sung in concert; for when they were up at the highest key, they would all of a sudden stop together, and then presently swell their notes, and resume their wonted harmony as loud as before. At other times they would raise and fall their notes in the most enchanting manner, and thus would their music last till day-break. When Mr. Smith first heard them, he was so ravished that he stood motionless for some minutes; and afterwards left his company in the house, and went out six or seven times on purpose to listen to their bewitching music; nay, he could not fall asleep for it till some hours after his getting into bed.—In short, during his stay at Nevis, his ravished soul joined most cheerfully with these little creatures every night in ardent and repeated hallelujas to the divine source of harmony and love.

AMONG

AMONG the insects found in Nevis, and other neighbouring islands, some travellers mention a curious one called a flying-tyger, because it's body, like that of a tyger, is marked with spots of various colours. It is about the size of a large beetle, has a sharp-pointed head, and two large eyes as green and sparkling as an emerald. It's mouth is armed with two very sharp hooks, with which it holds it's prey; and it's whole body is covered with a brownish crusty tegument. Under it's two largest wings, which are also of a solid matter, are four lesser wings as thin as the finest silk. It has six legs, each of which has three joints, and is beset with little prickles. In the day-time it is continually pursuing other insects which are it's prey; and in the night it lodges on the trees, where it makes a noise almost like a grasshopper.

THERE are horn-flies of several sorts, particularly one about three inches long, which has two snouts like an elephant's, the one turning upwards, the other downwards. It has a blue head, with two green eyes, incompassed by a small white circle. Out of it's back rises a horn shaped like a woodcock's bill, smooth on the upper side, and covered with down on the lower; which horn reaches to it's head, where it has another resembling that of a beetle, black as ebony, and as clear as glass. It's wings are of a violet-colour, intermixed with carnation; and where the upper ones are expanded two lesser ones may be seen under them, as thin as those of the flying-tyger, and red as scarlet.

THERE is another pretty little insect with four legs, called a fly-catcher, whose colours are various and beautiful. It comes boldly into rooms, and will even light upon the table when people are eating, and catch the flies that crawl upon

their cloaths. It's method is to lie waiting for the flies, and, when it sees an advantage, it leaps directly on it's prey, which it seldom misses. The small eggs these insects lay they cover slightly with earth, and leave them to be hatched by the sun.

It is now time to mention some of the vegetable productions of Nevis, which we have not occasionally described already. There are water melons, Mr. Smith tells us, of five or six different sorts, some of them full as big as his head. They melt in the mouth like a peach, and are, in that gentleman's opinion, far the finest fruit he ever tasted. The inhabitants eat great numbers of them, which, together with their other fruits, contribute to a plentiful discharge of urine. They have also musk-melons, which are the same with those in Europe; likewise shaddocks, penguins, belle-apples, sea-side grapes, and cashew-cherries, which last are called apples in Jamaica.

THE shaddock is a fruit shaped like an orange, and not unlike it in taste, though it has not so rich a flavour. It is of a beautiful lemon-colour, and as big as one's two fists.—Penguins are of two sorts, one of which is round, about the size of an apple, has a thick husk that covers the fruit, which is of a milk-white colour, and full of very small coal-black seeds. They are an agreeable fruit, tasting not unlike a strawberry, and are sometimes called by that name. The other sort smaller, of a longer shape, is very tart, and is used for gargling the mouth in fevers.—Belle-apples are about as big as a small golden-pippin, of a deep yellow colour, taste like a gooseberry, and have little seeds in them like those of that fruit.—Sea-side grapes grow in large bunches on trees as big as apple-trees, and near the sea-shore, as their
name

name implies. They are of a red colour, and of a very sweet taste.—The cashew cherries grow on a tree resembling the English dwarf apple-tree, but the leaves are of a much lighter yellowish green. The fruit is generally of a deep yellow, but sometimes of a palish red; its shape is conical, with the lesser end towards the stalk; and it is about the size of a middling pear. At the top of the cherry, in a little cavity grows the stone, by some called a nut, quite bare, and exactly shaped like a sheep's kidney. It is about an inch long, containing in it a kernel of a fine taste, but the fruit itself has a harsh and uncommon flavour. Mr. Smith tells us of a very singular use made of this stone by the young ladies in the West-Indies, who, when they fancy themselves too much tanned by the scorching rays of the sun, rub their faces all over with it, after having scraped off its thin outside skin. This causes their faces to swell, grow black, and the skin being thus poisoned comes off intirely in flakes in five or six days; so that they cannot appear in public for a fortnight at least, but then they have got a new skin that looks as fair as that of a young child. In the pores of this stone or nut, it seems, there is lodged a sharp aromatic oil, of a caustic quality, which, if tasted of, occasions an uneasy sensation for several hours; and it is this oil that takes off the skin of the face. Now, though this is frequently practised, our author does not remember above one lady who owned that she herself had tried the experiment. The whole operation she acknowledged was painful; but alas! (says Mr. Smith) what will not pride attempt?

THE calabash-tree is likewise the produce of Nevis, St. Christopher's, and several other of the Leeward islands. It spreads like a large apple-tree, and bears a fruit almost as big as a man's head, quite round

round, but is of no use except for bowls, &c. after the inside (which is not fit to eat) is scooped out; and then the shell is almost as thin and light as the thickest sort of brown paper. Mr. Smith was informed, that spoons, bowls, and other utensils for the slaves to eat out of, are made of calabashes at Barbadoes.

THERE is a tree in Nevis and the adjacent islands called diddle-doo, of the size and shape of a codlin-tree, but with narrow thin leaves. It bears a beautiful blossom, of the finest yellow and scarlet colours, somewhat resembling the flowers of nasturtium. These are esteemed a sovereign remedy in the green-sickness, which distemper however is very rare in so warm a climate, and where the young ladies so frequently use the exercise of dancing and riding on horseback, which all together keep the blood and other juices of the body in their regular courses.

IN their pastures they have a bush, growing about two yards high, called a sage-bush, the leaves whereof are not to be distinguished from those of the broad green sage, either by sight or smell. The tea made of it is of a fine yellow colour, but so extremely bitter, that the best refined sugar cannot render it palatable.

THEY have jessamine bushes at Nevis (not nailed to the walls as in England) which bear flowers full as large as primroses, of a very fragrant smell. These flowers are as white as snow, and so thick set together, that the whole bush, at a little distance, looks as if it was covered with a white Holland sheet.

WE ought not to omit a very singular sort of vegetable which Mr. Smith describes, though he cannot recollect it's name. It has neither roots, branches, leaves, nor flowers, but is round and
about

about as thick as a common whipcord, and runs along the tops of bushes all manner of ways, till it exceeds a hundred yards in length. It is of a most beautiful yellow colour, and intirely different from the bush which breeds and nourishes it; so that our author makes it a query, whether it may not be of the mistletoe-kind, though he never saw it growing on bulky trees.

ANOTHER singularity Mr. Smith takes notice of is, that in the mountain-plantations at Nevis, where they have asparagus produced from London seed, he has known it fit to cut in three months from the time of it's being sown; for there, instead of transplanting the roots, they let it run up to wood, in order to shade the bed from the scorching rays of the sun; and the young ones that grow up under that wood they cut for boiling: but by this means a bed will not hold good much above two years, and the asparagus is never large.

WE shall close our account of the vegetables of Nevis with a plant called cassada, which is remarkable for being of a poisonous quality, and yet affording a good sort of bread to the inhabitants of many parts of the West-Indies*. Cassada (according to Mr. Smith) is a shrub four feet high or upwards, the stem of it being strait, tough, brownish, and very knotty, just like a crab-tree stick; and at the top it is beset all round with long narrow leaves of a deep green colour. In order to

* Dr. Derham observes, that many plants, animals, and minerals, which in one form are destructive to mankind, in another are useful and healing; and as one instance he mentions the cassada plant, which unprepared poisoneth, but prepared is the very bread of the West-Indies. Sir Hans Sloane says it is used to victual ships, and is of the most general use of any provision all over the West-Indies, especially in the hotter parts.

make bread of this plant, the root of it is carefully scraped till the white part appears, and then it is rubbed hard against a tin grater about two feet long, shaped like a nutmeg-grater, and nailed fast to a piece of wood; and, being very juicy, it is soon reduced to a soft matter resembling children's pap. This pappy substance is then put into a hair bag, and pressed hard between two stones, till there runs from it a milk-white liquor of a disagreeable smell, and which is rank poison; for, if a turkey, hen, or other fowl, happen to get to the press and taste this juice, it instantly dies. After this the cassada is laid in the open air, that the heat of the sun may exhale what poisonous particles the press could not squeeze out; and, being thus dried it is sifted through a sieve, made into thin cakes, and baked upon a broad iron kept purely for that purpose. Our author was an admirer of this bread, and assures us it made excellent puddings.

THE productions of St. Christopher's, Antegoa, Montserrat, and the other Leeward islands, being much the same as those of Nevis, we shall have the less to say concerning them, though we must not wholly pass them over in silence. St. Christopher's is the largest of all these islands, and is represented by some writers as one of the most delightful spots in the world, its mountains, though in some parts there are dreadful rocks and precipices, rising gradually one above another, and being adorned with woods ever verdant (except towards the top) and intermixed with plantations, houses, and gardens. Mr. Smith, whom we have so often quoted, paid a visit to a friend at St. Christopher's, and took a journey to the top of the great mountain there, an account whereof is
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the subject of one of his letters, of which we have already made some use, and from whence we shall now extract a few more particulars.

FROM Basse Terre, the chief town of the island, our author set out with his friend for Chianne, and, after riding through many plantations of sugar, and some of cotton, they came to thick woods, wherein they were agreeably entertained with the soft notes of vast numbers of turtle-doves, which, with the murmurs of the sea beating gently against the rocks at half a mile's distance, were enough to lull any one to sleep who was so inclined. To avoid the heat of the sun they travelled along the gill (or deep valley) which runs upwards from the sea-side, growing steeper the farther from the coast, and plentifully stocked with wild palm-trees, pimento, cassia fistula, and other fragrant trees. Through the whole length of this gill, which is about two hours journey, runs a little but exceedingly transparent river of very sweet water; and not far from the side of this rivulet there is a pleasant garden, regularly planted with rows of citrons, lemons, oranges, limes, pomegranates, &c. besides pine-apples, asparagus, lettuces, and all sorts of European roots and herbs that will grow in so warm a latitude. To this garden the gentlemen and ladies often come from Basse Terre, to divert themselves, with singing, dancing, cards, and such-like amusements.

In the evening our author arrived at his friend's house at Chianne, which is about eight miles from Basse Terre, the road thither having the ocean on the right, and the vast Conorrhee hills on the left, whose lofty tops then touched the clouds, and seemed to rise to that height almost perpendicularly. The next morning they diverted themselves with catching cray-fish in Chianne river, or rather brook,
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for it is narrow and shallow, but a very clear stream, which they poisoned with green tobacco pounded and mixed with unslaked lime. This poison is so strong that the fish crept out of the water to shun it; at which Mr. Smith was not a little surprised, but his friend assured him it was a common thing.

THE thick woods in this island swarm with monkeys, who venture out in the night to steal potatoes and other provisions. Through these woods our traveller, in company with nine others, Whites and Negroes, began to ascend the mountain, the ascent growing steeper and steeper, the higher they advanced; and in the like proportion the large trees began to dwindle and grow shorter. Before they passed by all the trees, they entered among the clouds, which felt raw and cold, not unlike a fog in a winter's morning. From these woods to the top, which is almost half a mile, there are no trees at all, and very rarely a bush, the ground producing scarce any thing but a sort of wild pine-apple-plants, which bear no fruit. Being at last arrived at the top with great fatigue, the clouds were at least half a mile beneath them, but, the wind dispersing them, a lovely view was opened of the woods and plantations below, besides an unbounded prospect of the Atlantic ocean. The top of this mountain is a small plain, not three hundred yards wide, ending at the verge of a vast deep cavity, exactly round, and about a mile in circumference. Our author judges it's perpendicular depth to be about two hundred and twenty yards, and owns he looked down into it with horror, observing large and continual clouds of steam arise from the veins of sulphur, &c. with which the bottom of it every-where abounds. The rim of this cavity, except where it joins to and makes

makes part of the plain, is not above twenty, and in some places scarce ten yards broad; and the inside of it, for at least half-way downwards, appears to be solid rock, over-run with very short blackish moss. Upon maturely weighing the whole state of this mountain, says Mr. Smith, we unanimously agreed that it was on fire underneath us, and that the cavity was formerly (perhaps ages ago) occasioned by some furious and dreadful eruption, when it might be a volcano for a while, like Vesuvius or *Ætna* *.

UPON the rim of the cavity, to the south-east, there is a large and steep rocky mount, called mount Misery, from a rash fool, who, attempting to climb the precipice, fell backwards and was killed. It is the highest point of land on St. Christopher's, its height being reckoned a mile and a half perpendicular from the sea; but Mr. Smith thinks it not so high by a quarter of a mile. This vast mountain is in the middle of a long chain of lesser and lower ones, that run cross the island; but, lofty as it is, our author thinks the Nevis mountain considerably higher.

THE whole breadth of one part of the above-mentioned rim is taken up by a large single rock, in the form of a triangular pyramid, equilateral, and almost as smooth as if it had been cut by the chissel of a skilful workman. From angle to angle (at the base) it measures seven or eight yards, is somewhat blunted or rather broken off at the top, and a third part downwards from thence it

* Our author's conjecture is highly probable, since there is just such a mouth or cavity on the top of Vesuvius, from whence the fiery eruptions proceed, as this he describes on the top of the mountain at St. Christopher's—See Vol. II. p. 10.

seems to be cracked quite through sideways. The colour of the rock resembles the red part of oriental granite, and like that too is so extremely hard, that a strong arm can scarce make a visible impression on it with the steel point of a sharp cutlass. This triangular pyramid on one side of the cavity, and mount Misery on the other, each taking up the breadth of the rim, prevent a person's walking more than half way round the circle.

NEAR this pyramid, by the help of bushes and roots, our author and his company ventured to slide down forty or fifty yards into the cavity, till they came to some wild bananas which were ready to quench their thirst with most clear and excellent water that runs out of them upon sticking in a penknife just where the leaves join to the top of the body of the tree, and so form a small hollow, as if on purpose to receive the blessings of Heaven, the rain and the dew, and reserve them for the thirsty traveller. It is observable of these trees, that they are annuals, dying quite to the ground every autumn, and shooting up again from the roots in the spring till they are thicker than a man's thigh; but the wood is so very soft and porous, that one may easily cut it through at a single stroke with a good sharp hatchet.

KEEPING on in a very steep descent, through this wood of bananas, cabbage-trees, &c. they arrived at the bottom of the cavity, where having crossed a little plain they came to an uneven spot of ground consisting of thirty acres or upwards. Here they found a very large rock, jutting out of the side of the hill; and at the bottom of it were three or four round holes in the earth as wide as a hat-crown, from whence issued hot steams like smoke out of chimneys, which tinged the edges of the holes with seemingly very fair brimstone.

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The little plain above-mentioned is so sulphureous that it bears nothing but long deadish grass or rather weeds, with a few short rottenish bushes.

At length they came to some boiling springs, commonly called the devil's coppers, each of them about a yard in diameter. The water is of a muddy colour, and rises to within a foot of the surface of the ground, boiling fiercer, Mr. Smith says, than ever he saw a sugar-copper, and sending up strong clouds of steam into the air. No kind of grass will grow within twelve yards of them, the soil being wholly sulphur, and so excessive hot, that Mr. Smith and others in company immediately perceived it warm through thick shoes which they had bought on purpose for this expedition. A Negro, who was with them, was strangely frightened at the sight of these coppers, as they are called; and could not be dissuaded from believing that Jumbee (i. e. the devil) had his residence underneath them.

On the south side of the plain before-mentioned there is a pond about forty yards over, not supplied by springs, but by rains, which fall plentifully and very heavily in that warm latitude. The bottom of this pond consists intirely of clay, of which our author cut up a piece, and to his great surprise found it as beautifully veined as the finest hard Castile soap, and as fair as well-polished blue-veined marble. — Near this pond grew a bed of rushes, on which the company sat down and dined, and, after resting themselves about two hours, returned back to Chianne the same way they came, not a little fatigued with their journey.

THE vegetables of St. Christopher's are much the same as those of Nevis already described, and so are the animals; but there is a bird called a booby,

booby, which gives name to a little island between the two last mentioned, that seems to deserve some notice. It is a large bird, of a dunnish colour; and, if one of them alights (as they now and then do) upon a ship's yard-arm, it will stand there till a sailor can climb up and catch it with his hands, all the while pecking and screaming out, but never offering to fly away; from whence it has justly obtained the name of booby.—And here it may not be improper to mention another bird, somewhat bigger than a pigeon, great numbers of which are found in a little island called Prickle-pear, to which the women of Anguilla, an inconsiderable island about a day's sail from Nevis, resort annually to strip them of their feathers; and the poor creatures, it seems are so silly as to suffer these women to knock them down with sticks, as they fly about. It is somewhat strange however, as our author observes, that repeated experience does not teach them wit enough to keep farther off from such dangerous enemies.

THE produce of Antegoa or Antigua is much the same with that of the other Caribbee islands, but sugar is it's principal commodity, of which it is reckoned to yield one year with another sixteen thousand hogheads. The soil is sandy, and much of it overgrown with wood; and though, as Mr. Smith tells, there is not one single spring of water in the island, but it's sole dependance is on what falls from the skies, for which it is sometimes distressed, yet it is a thriving and very considerable plantation. When the gentleman last mentioned was at Antegoa, it was a time of great drought, and the face of the country looked dismally enough; their ponds were then very dry, and their cisterns almost empty, so that they were obliged to fetch their fresh water from Guadaloupe and Montserrat, which

which was afterwards sold for eighteen pence a pail-full. — The capital of the island called St. John's is a very regular town, and has the most commodious harbour of any in the English Leeward islands.

A T Antegoa they have fine prawns, a fish not to be met with at Nevis; and they have a small land-crab, whose shell is not broader than a crown-piece, which they eat as a dainty; but these are neglected at Nevis, because there they have plenty of a larger sort. — Mr. Smith farther informs us, that there are found in Antegoa some large white and roundish stones, whose inside is hollow, and the outside overspread, as it were, with one continued heap of fair crystal, which sometimes in a tolerable degree resembles wrought diamonds set close together. That gentleman had a ring ornamented with one of them, cut brilliant-fashion, which looked like a Bristol stone.

THE island of Montserrat is mountainous, but it's valleys are well watered and fruitful. The mountains are covered with cedars, cypresses, iron-trees (so called from the hardness of the wood) and variety of shrubs and plants, particularly one called the musk-herb, which grows like a bramble, but is not prickly, and bears yellow flowers, which are succeeded by pods full of seeds that smell like musk. Indigo and sugar are it's chief commodities, but it is not reckoned so good as that of Jamaica and Barbadoes. In short, it is a well-planted island, and pretty much frequented by shipping, but it is so surrounded with rocks, that the riding before it is unsafe, and it has no place that can properly be called a haven.

WE find nothing more remarkable relating to Montserrat, than the dreadful hurricane which happened there on the 29th and 30th of June 1733,
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and blew down three fifths of the houses in the island. On the 29th there were thirty-four windmills going, many of which were intirely destroyed. A large copper, that held two hundred and forty gallons, was carried over a high wall, and beat close together by the fall. An empty sugar-hogshead was lifted off the ground by the wind, and carried thirty or forty yards over a dwelling-house. But, what is most surprizing of all, a cattle-mill-house, weighing at least twenty thousand pounds, was carried some distance from it's situation, and by the force of the fall was broken into innumerable shivers. Such havock was made among the sugar-canes, that some planters, who had a prospect of making two or three hundred hogsheads the next year, would gladly have compounded for sixty or eighty. In a word, the whole damage, exclusive of the shipping, was reckoned not less than fifty thousand pounds of their currency.

TABAGO, or Tobago, the most easterly of all the Caribbee islands, is thirty-two miles in length from the south-east to the north-west, about nine broad from east to west, and about seventy miles in compass. It is not so hot as might be expected from it's being seated so near the equator, as the eleventh degree ten minutes north latitude; and it is agreeably diversified with hills and vales, it's north-west extremity is mountainous, but no part rugged or impassable. It's soil is in general rich, and proper for producing in the greatest plenty, whatever is raised in the other parts of the West-Indies. It's many springs contribute to it's healthfulness and fertility, and it's bays and creeks are commodious for all kinds of shipping. The valuable trees that grow in this island are perhaps it's richest produce; for, besides it's producing

ducing the different kinds of wood found in the other West-Indian islands, the Dutch, by whom it was once settled, affirm that both the true nutmeg and the cinnamon-tree, with that which produces gum-copal, grow upon it. It is said also to produce five different kinds of pepper, with Indian and Guinea corn without culture. The figs that grow here are as good as those of Spain and Portugal. The pine-apple, the prickly-apple, oranges, lemons, and limes, are found here in plenty; and excellent marmalade is made of it's guavas. Here are also the finest plantanes, tamarinds, grapes, the custard-apple, the mammee-apple, the papaw-apple, the cocoa-nut, musk, and water-melons. It has been settled both by the Dutch, the Courlanders, and the French; but by the last treaty of peace was ceded to Great-Britain, and measures have since been taken to sell the land in shares, and people the country.

DOMINICA lies about half-way between Guadalupe and Martinico; it extends about thirty-nine miles in length from the north-west to the south-east, and near as much over in it's broadest part. The soil is good, and the sides of the hills are said to bear the finest trees in the world; indeed it is esteemed one of the best of the Caribbee islands on account of it's fruitful valleys, extensive plains, and fine rivulets. It produces, among other fruit, the finest figs, and in general it's produce is much the same as that of the other Caribbee islands. Here are a great number of ring-doves, ortolans, and partridges, with two sorts of wild hogs, descended from such as were first brought from France and Spain. This island was in express terms ceded to the king of Great-Britain by the late treaty of peace.

ST. LUCIA was thus called, [from it's being discovered on the day dedicated to St. Lucia, the virgin martyr. It lies about six leagues south of Martinico, and twenty-one miles to the north-west of Barbadoes. It is twenty-three miles in length, and twelve in breadth; and has several hills, at the foot of which are fine pleasant valleys, well watered with rivers, and shaded with tall trees that afford excellent timber. The air is salubrious, and it has several good bays and harbours. This island, with that of St. Vincent, after being at different times inhabited by the English and French, were declared neutral; but, by the late treaty of peace, the French king resigned all claim to them to his Britannic majesty.

GRANADA is about thirty miles in length, and in some places fifteen in breadth, it has several smaller islands near it, called the Granadillas; and enjoys a good air, and a soil remarkably fertile. They all produce very fine timber, as well as fruit-trees; particularly the latin-tree, which has a tall trunk, and instead of boughs bears leaves like fans, with long stalks, which, being tied together, serve to cover the roofs of houses. Here are abundance of armadillos, whose flesh is said to be as good as mutton; and the soil is fit for producing sugar, tobacco, and indigo. These islands were ceded by the French to the crown of Great-Britain by the definitive treaty of 1763, and are now in part settled by his majesty's subjects.

THE rest of the Caribbee islands possessed by the English are too inconsiderable to detain the reader with an account of their productions; but we think it not improper, before we take our leave of the British colonies, to give some account of the Bermudas, or Summer islands, which lie a great way north of the Caribbees, in the same latitude

itude with South Carolina, which is the nearest land to them, and yet that is about three hundred leagues distant. Their first name they had from John Bermudes, who discovered them in 1503; and their second from Sir George Sommers, who was shipwrecked upon them in 1609, since which they have been corruptly called the Summer islands. They are many in number, but most of them are small, barren, and uninhabitable. The largest of them, called St. George, is about sixteen miles long, and three over where broadest, and is surrounded with high rocks which jut a good way into the sea, and serve it instead of a strong rampart.

WHEN the English first settled here, they found themselves infested by such vast numbers of large rats as devoured all their provisions both in their houses and in the field, and were like to have caused a famine, and overthrown the settlement. At length however, they found means to rid themselves of those destroying vermin, and have since so well improved their little plantation, that the number of English inhabitants are computed to be above ten thousand, (besides slaves) who carry on a good trade in tobacco, of which they have large crops, but far inferior in goodness to that of our other plantations. They have likewise some cochineal, take some pearls on their coasts, and some small quantities of ambergrise; and these are the chief articles of their commerce, for the security of which they have built no less than ten forts, most of them well manned and armed, and all kept in good repair.

THE country is mostly mountainous, but is has fertile plains. The soil is of various colours, some brown, (which is esteemed the best) some whitish, and some reddish, not unlike potter's-clay. Two

or three feet below the mould there lies a white hard body, which the inhabitants call the rock, but seems rather to be a sort of chalk or pumice-stone, through which however the roots of the trees force themselves a passage. Upon the whole, though the soil is thin and stony, it is very fruitful; the climate is temperate, yet warm enough to produce two crops in a year; but the water is generally brackish and disagreeable, except that which falls from the clouds, and is preserved in cisterns.

THIS island produces some fine fruits, especially oranges, which are reckoned very delicious, and used formerly to be brought into Europe. The cedars that grow here are said to excel in many respects those of other parts of America, particularly in the fragrancy, durableness, beauty, and hardness of their wood; and here is such plenty of them, that they are used in building sloops, brigantines, and other vessels, as well as in their churches and some of their houses: and it is to be observed, that ships built at Bermudas are reckoned as good as any throughout the West-Indies.—Their palmetto, or wild palm, is also very useful, the wood being serviceable for building or fuel, and the leaves, which are eight or ten feet long, making a good covering for their houses.

THE woods of Bermudas afford several medicinal vegetables, and among the rest one that bears a berry of a styptic quality, used by the English to cure those fluxes with which they are commonly afflicted by eating too frequently of the palmetto or other delicious fruits. But there are two plants particularly remarkable and singular, the one for it's use, the other for it's noxiousness. The first is the red wood, so called from it's fine tincture, especially that of it's berry, from whence proceed little worms, which afterwards become flies,

flies, some of them larger than the cochineal-fly, and said to exceed that in it's medicinal virtue. The other is a weed which grows much like our ivy, and, according to the account of a gentleman who had resided a long time at Bermudas, is of so poisonous and subtil a nature, as to affect a person only passing by it, without touching it, in such a manner as to peel the skin off his face. However, it appears by the gentleman's account, that it does not affect all constitutions alike, since he himself tells us, that he had chewed it in his mouth without feeling any inconvenience. This is said to be the only plant of a poisonous nature in the whole island.

THERE are such numbers of turtle caught at Bermudas, that the inhabitants make them their common food, their flesh being very white, tender, and delicious. They have a surprising variety of fowls, such as swans, ducks, widgeons, teals, snipes, hawks of several sorts, storks, herons, bitterns, cormorants, baldcoots, moorhens, &c. besides a multitude of sparrows and other birds of the smaller kind. There is likewise a sort of water-fowl peculiar to these islands, which are called cowkoes, and hatch their young in holes and burrows of the rocks like rabbits. They are as big as a sea-mew, and were formerly in great plenty; but, being of so gentle a nature as to be easily caught, and withal very good food, the inhabitants have made such havock among them, that they are now rather scarce than numerous.—The tropic-bird is also frequently seen about Bermudas, which is a high-soaring bird, about the bigness of a partridge, of a milk-white colour, with a tail consisting only of one single white feather a foot and a half long. These birds are commonly met with about the tropics, whence their name, and often many

hundred miles from land; which may also be said of the sheer-water, a brownish-coloured fowl, almost as big as a goose, which is very strong-winged, and frequently alights on the ocean.

THEY have such plenty and variety of fish about these islands, that they have not yet found names for many sorts of them, both of the scaly and shelly kind. Some whales are caught upon their coasts, chiefly in February, March, and April; but all their attempts to establish a whale-fishery have been unsuccessful. The Bermudans formerly drove some traffic in sperma-ceti and train oil, but that branch of their commerce is now decayed.

IT is said there are no venomous creatures of any kind in Bermudas, but perhaps a greater variety of insects than in any other of our plantations in proportion to the bigness. Amongst these their spiders are very remarkable, for their extraordinary size and the strength of their webs. Their bodies consist of two parts, one flat, the other round, and both together, with the legs stretched out, are large enough to cover a man's hand. This monstrous bulk makes them look frightful, but the beauty and variety of their colours in some measure take off the distaste. The round part of their body is shaped much like a pigeon's egg, and under the flat part grow their legs, five on each side, with four joints, and claws at the end. They have a little hole in their backs, and their mouths are covered with greyish hairs, intermixed with some bright red, and have a crooked tooth on each side, of a hard polished substance, and of a bright shining black; so that they are often set in gold and silver, to serve for tooth-picks. When these creatures grow old, they are covered all over with a sort of down, of a brown or blackish colour, very smooth, soft, and shining like velvet; and it is said they cast their
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downy skins every year, as well as the two teeth just mentioned. They shew a wonderful skill and agility in spreading their webs from tree to tree, which, are so very large and strong, as to extend seven or eight fathoms, and when finished will ensnare a bird as big as a thrush.

THESE islands, like the Caribbees, are subject to violent hurricanes and thunders; but, upon the whole, the inhabitants seem to be happy in the pleasure and plenty of their country, which they look upon as a safe and quiet retreat from the cares and troubles of the world. They enjoy a pure sweet air and temperate climate, the heat being moderated by constant sea-breezes; and, in short, they have such a reputation for their healthiness, that they are resorted to as the Montpelier of America. Mr. Stafford (in the Philosophical Transactions, No. 40.) tells us, that people there frequently live a hundred years or upwards*, and that they die of age and weakness, rather than any disease.

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* A hundred years is certainly a great age, and what very few arrive at, compared with the bulk of mankind whose longevity dwindled as the world was peopled, till it came down to seventy or eighty years, and there it stood and has continued to stand ever since the time of Moses. In our own country we have some extraordinary instances of long life, as that well known one of old Parr, who lived a hundred and fifty-two years and nine months. But Parr was considerably exceeded by Henry Jenkins, who (as Dr. Robinson informs us in the Philosophical Transactions, No. 221.) died in 1670 at Ellerton on Swale in Yorkshire. He was about twelve years old when the battle of Floddenfield was fought, which happened on the 9th of September, 1513; so that he lived a hundred and sixty-nine years. His diet was generally coarse, and in the last century of his life he was a fisherman, but towards the end of his days he begged up and down. He had sworn in
Chancery

WE shall now return towards the east coast of America, and proceed to the north, where, entering the gulph of St. Lawrence, we shall find three islands subject to Great-Britain.

CAPE BRETON, which was conquered during the late war, and ceded to his Britannic majesty at the conclusion of the peace, is seated in the above gulph, and is above one hundred and ten miles from the north-east to the south-west, and round it are a number of harbours and bays, which form a safe retreat for ships bound either to or from Canada, whence it has been generally considered as the key of Canada. The climate is however severe in winter, and subject to fogs; a considerable part of the land is also barren: it however produces oaks of an extraordinary size, pines, beech, maple, ash, cedar, aspin, wild cherry and plane trees; with some sorts of fruit, particularly apples. The mountains may be cultivated up to their tops, and it is observed that the good soil always inclines towards the south. There are here great numbers of fowl, particularly very large partridges, and many animals originally brought from Europe, as horned cattle, sheep, goats, hogs, and poultry. The lakes, rivers, and bays, abound with beavers, otters, and excellent fish in the greatest plenty.

THE island of St. John is situated partly between Cape Breton and the continent, whence it

Chancery and other courts to above a hundred and forty years memory; and Dr. Robinson was told by some Yorkshire gentlemen, that Jenkins frequently swam the rivers after he was past the age of a hundred years. — Add to these instances those of the countess of Desmond and Mr. Ecclestone, both of Ireland, who each lived to above a hundred and forty years of age.

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has nearly the same climate; but greatly exceeds that island in its pleasantness, and the fertility of its soil. It is about sixty miles in length, has a commodious harbour, and abounds with a variety of useful timber, and most kinds of game common to the neighbouring country. It is so fertile, and was so well improved while in the possession of the French, that it was stiled the granary of Canada; and when taken in the late war, had upwards of 10,000 head of black cattle, and some of the farmers annually raised 1200 bushels of corn. It has several rivers which abound with salmon, trout, eels, &c. and the surrounding sea affords plenty of sturgeon, plaice, and most kinds of shell-fish. Both this island and Cape Breton, with several small adjacent islands, are under the governor of Nova Scotia.

NEWFOUNDLAND was thus called by Cabot, by whom it was discovered in 1497. It is of a triangular form, and seated on the east side of St. Lawrence, extending three hundred and fifty miles in length from north to south, and two hundred in breadth at the base. Its coasts are extremely subject to fogs, that rise from the vapours exhaled from the lakes, swamps, and bogs, with which the island abounds. The winters are severe, and attended with almost continual storms of snow; and the soil is barren, except on the banks of the rivers. There are, however, woods of different kinds, throughout almost the whole country, which contain abundance of timber fit for ship and house building, and, in many places where the lands are cleared, is good pasturage. There are here many fine rivers, lakes, and rivulets, that abound with beavers, otters, and fish; and the forests are stored with deer, bears, wolves, and foxes; but there are few horned cattle, sheep, or horses; therefore, instead of the latter, the inhabitants make use of dogs

for drawing wood and other necessaries; for which purpose they fix them in leather collars, and yoke together what number they please. There are here great plenty of wild fowl; and near the coast is the finest cod-fishery in the world. The number of British inhabitants on the island is very fluctuating and uncertain, there not being half the number in winter that there are in summer.

COMMERCE of the BRITISH AMERICAN ISLANDS.

IT is now proper to give some account of the cod-fishery, for which it's coasts have been long famous, and which is a branch of commerce of prodigious advantage to Great-Britain, as the French know very well, and are therefore endeavouring to get as large a share of it as possible into their own hands. That part of the sea, where this fishery is chiefly carried on, is about the great bank of Newfoundland, which is a kind of submarine mountain of sand, about a hundred and fifty leagues in length, and in some places fifty in breadth, lying on the east side of that island. To this great bank, and others near the coast, several hundred ships resort annually from divers parts both of America and Europe, many of which bring away thirty or thirty-five thousand fish apiece; and, though this yearly consumption has been made for two centuries past, yet the same plenty of fish continues, without any sensible diminution, insomuch that one would think them equal in number to the grains of sand on the banks they frequent*. The gulph of
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* We have heretofore taken notice of the vast fecundity of plants, and that of fishes is not less surprising, especially when we consider that these inhabitants of the waters are not only
destroyed

St. Lawrence, and the coasts of Nova Scotia; and Cape Breton, as well as those of Newfoundland; abound with these inexhaustible treasures, these rich mines, which are of greater value, and cheaper wrought, than those of Peru and Mexico: For, as the author of the British Empire in America observes, besides the great profit which particular

destroyed by man, their common enemy, but are perpetually devouring one another, the smaller being a prey to the greater. But notwithstanding these mutual depredations, and the snares of the fishermen, by which one would think the watery element would in time be depopulated, we see the wise Creator has sufficiently provided for their preservation by giving strength to some, to others activity and circumspection, and by multiplying them to such an astonishing degree, that their fecundity exceeds their natural impatience to devour one another, and those vast numbers that are destroyed are soon recruited by the survivors of the species. Thus cod-fish in particular, though so many ship-loads are every year taken about the great bank of Newfoundland, those remaining of the same tribe are always more than sufficient to furnish us with the same quantity the succeeding season. Almost every one has an opportunity of observing the prodigious number of eggs or spawn in some sorts of fishes; but what can the naked eye discern in comparison of what M. Leewehoeck discovered by the assistance of his excellent microscopes! This gentleman, examining the spawn of a cod-fish, took one of the hairs of his head, which through his glass appeared to be an inch broad, and placing it near the animalcula contained in the spawn, he found that at least sixty of them would lie within it's diameter. This being supposed, and their bodies being allowed to be, as they are, spherical. M. Leewenhoeck computed that 216,000 of them are equal to a globe whose axis does not exceed a single hair's-breadth, M. Petit found 342,144 eggs in the hard roe of a carp eighteen inches long; but M. Leewenhoeck only found 211,629 eggs in one of those fishes. What is most to our purpose however, the last mentioned curious inquirer into the secrets of nature tells us, that a cod contains 9,344,000 eggs. Who can help standing amazed at this prodigious fertility, undoubtedly designed by providence to preserve the species from being entirely destroyed by any accidents or enemies whatsoever!

persons make of this fishery, considering the seamen it breeds, the tradesmen it maintains, and the shipping it requires, the increase of the national stock arising from thence is almost incredible. A ship of a hundred tons, with the charge only of victuals, wages, and fishing-tackle for twenty hands, shall carry to market in Portugal, Spain, or Italy, three thousand pounds worth of fish, by which the proprietors shall gain at least two thousand; so that a hundred and fifty such ships will clear three hundred thousand pounds annually, and consequently so much will the public and private stock be increased.

IT is to be observed, that there are two sorts of salt cod, the one called green or white, the other dried or cured; but they are both the same fish, only differently prepared. The best, largest, and fattest cod are those taken on the south side of the great bank; and the best season is from the beginning of February to the end of April, for then the cod, which during the winter had retired to the deepest parts of the sea, return to the bank, and grow very fat. Those caught from March to June keep well enough; which cannot be said of those taken in July, August, and September. An experienced fisherman, though he only takes one fish at a time, will catch three hundred and fifty or four hundred in a day, but not often so many; for it is very fatiguing work, both on account of the weightiness of the fish, and the cold that reigns about the bank. When the heads of the fish are cut off, their bellies opened, and the guts taken out, the salter (on whose ability and care the success of the voyage chiefly depends) ranges them in the bottom of the vessel, and, having made a layer thereof a fathom or two square, he covers it with salt; over this he lays another, and

and covers it as before; and thus he disposes all the fish of one day, taking care never to mix the fish of different days together. When the cod have thus lain to drain for three or four days, they are moved into another part of the vessel, and salted a second time; and this is all the preparation these green fish undergo.

THE principal fishery for cod intended to be dried is along the southern coast of Newfoundland, where there are several commodious ports to carry the fish ashore; and though, the fish are smaller here than at the bank, on that account they are the fitter to keep, as the salt penetrates them the better. As cod are only to be dried in the sun, the European vessels are obliged to put to sea in March or April, in order to have the benefit of the summer for drying. Some vessels indeed are sent in June and July, but those only purchase fish already prepared by the English settled in Newfoundland, giving them meal, brandy, biscuit, pulse, linen, &c. in exchange. — When the ships arrive in the spring, and have fixed upon a station, some of the crew build a stage or scaffold on shore, whilst the rest are a fishing, and as fast as they catch their fish they land them, open them, and salt them, on moveable benches; but the main salting is performed on the scaffold. As soon as the fish have taken salt they wash them, and then lay them in piles to drain. When drained, they range them on hurdles, head to tail, and whilst they lie thus they turn them four times every four and twenty hours. As they begin to dry, they lay them in heaps, of ten or twelve apiece; and continue to enlarge the heaps every day, till they are double their first bulk. At length they join two of these heaps together, and turn them every day, as before. Lastly,

Lastly, they salt them over again, beginning with those that have been salted first, and then lay them in huge piles as big as hay-stacks. Thus they remain till they are carried a ship-board, where they are laid on branches of trees, disposed for that purpose at the bottom of the vessel, with mats all round, to prevent their contracting any moisture.—Besides the fish itself there are other commodities obtained from it, viz. the tripes and tongues, which are salted at the same time with the fish, and put up in barrels; the roes or eggs, which, being salted and barrelled up, are of use to cast into the sea to draw fish together, particularly pilchards; and the oil, which is drawn from the livers, and used in dressing of leather.

As to the commerce of our islands in America, some part of it has been already taken notice of in speaking of that of our colonies on the continent; nor shall we enlarge much on that head, but only add a few particulars from which the reader may judge of the vast importance of them to Great-Britain. Of these islands Jamaica seems to be of the greatest consequence, being reckoned bigger than all the other British sugar-islands put together, Barbadoes excepted. From Jamaica alone we annually receive about ten thousand tons of sugar, besides two thousand more in cotton, indigo, ginger, pepper, rum, and other commodities, the produce of that island; so that there is not less than twelve thousand tons of our own shipping constantly employed in that service only, besides what is employed between the island and the northern plantations. In return for these goods Jamaica takes from us great quantities of our manufactures, both woollen, linen, and silks, as well as wrought iron, brass, copper, and all sorts of household furniture. This nation also reaps great advantage from the trade
of

of the other sugar-colonies, of which Barbadoes is a remarkable instance; for it appeared to the parliament in 1730, that this island exported to England in one year 22,769 hogsheads of sugar, valued at 340,396 pounds: and according to a treatise concerning the importance of the sugar-colonies, published in 1731, they all produce, on an average, 85,000 hogsheads in a year; the neat profit whereof the author supposes to be spent in England by the proprietors of estates in those colonies who reside here, or sent out annually in British manufactures, either directly to the sugar-colonies, or to the coast of Guinea to purchase Negroes for their service. The same author reckons, that there are three hundred sail of ships sent every year to our sugar-colonies from Great-Britain, (not to mention those from other places) which are navigated by about four thousand five hundred seamen; and that the freight for the sugars brought hither amounts to 170,000 pounds per annum; and the duty, commissions, &c. to little less than 200,000 pounds more: so that, upon the whole Great-Britain gains yearly by the sugar-trade about 1,200,000 pounds, besides the profit arising from the other articles imported from those valuable plantations. As to the exports from hence to our sugar-colonies, it appeared by the Custom-house books in the year 1726, that the British manufactures exported to Jamaica, Barbadoes, and the Leeward islands amounted to 234,785 l. 17 s.

The FRENCH AMERICAN ISLANDS.

TO return to the Caribbees: the largest and one of the finest islands possessed by the French in those parts is Guadaloupe or Guardaloupe, though it is not near so populous as Martinico. Since

Since the beginning of the present century, however, this French colony is very much improved, and is reckoned to contain ten thousand European inhabitants, besides thirty thousand Negroes, and to make more sugar than any of the British islands, except Jamaica. The island is well watered, the air clear and wholesome, and the soil is fertile, producing, besides sugar, cotton, indigo, ginger, tobacco, cassia, pine-apples, and plenty of rice, maize, and potatoes. Some of its mountains are over-grown with trees of various kinds, and amongst them there is a volcano continually smoking, which gives a sulphureous taste to the rivers that have their rise near it: there are also several boiling springs in the island, which are said to be good for the dropsy and other distempers.

AMONGST the vegetables of Guadaloupe father Labat found the copau-tree, famous for its healing balsam or oil, which he says he had sought for in vain throughout all the other French islands. This tree grows to the height of about twenty feet, having a leaf like that of an orange-tree, only somewhat longer and more pointed, and of an aromatic smell; as is also its bark when rubbed between the fingers. The balsam is obtained by making incisions in the bark of the tree, and is recommended by the abovementioned father as a specific for almost all maladies, both internal and external.—Here Labat likewise found the milk-shrub, whose leaf resembles that of the laurel, only it is larger, thicker, and softer; and its fibres, when pressed, yield a liquor just like milk both in colour and consistence. It bears flowers much resembling those of jessamine, being white, and containing in the middle a little oval bud, which incloses two small black seeds, from whence the plant is propagated. Its bark is of a pale green.

green without, and white within; and it's pith is like that of elder. Labat attributes to it's juice almost as many virtues as to the balsam of the copau-tree.—In Guadaloupe there is also a tree called corbary, which bears fruit in a shell containing a pulp of a saffron-colour, and yields a gum, which being hardened in the sun is very transparent; so that the native Caribbees used it for bracelets and other ornaments.

As to the animals of this island, they are in general the same with those of the neighbouring ones already described; but there is a bird of passage, which Labat says he met with in none of the islands but this and Dominica. It is about the size of a young pullet, and it's plumage is as black as jet; it's wings are long and strong, it's legs short, it's feet like those of ducks, but armed with strong claws; and it's beak crooked, sharp-pointed, and extremely hard. It has large eyes, with which (like an owl) it sees best in the night, when it catches fish out of the sea, which are it's only food; and, if these birds are disturbed in the day-time, the light so dazzles their eyes, that they fly against a tree or any object in their way. Our author supposes they are the devil-birds, that are seen in Virginia and the adjacent countries, from May to October. From the beginning of October to the end of November they stay at Guadaloupe, after which they are not seen till about the middle of January. There is a mountain in the island, from these birds called the devil's mountain, where they lodge in holes like rabbits, flying out to sea in the evening, and returning to the mountain in the morning. Here they lay their eggs and hatch their young, which are ready to fly about the end of May, and are very tender food, but their fat is like so much oil. The flesh of the
old

old ones is blackish, and has a fishy taste, but otherwise it is very good and nourishing. The Negroes and poor people have scarce any other sustenance than these birds during the season; and Labat thought it a great providence that they harboured in places so difficult of access as he found the above-mentioned mountain, otherwise the French would long ago have destroyed the species.

FATHER Labat tells us, that he once indulged his curiosity to accompany four Negroes in this kind of fowling, not without great fatigue and danger. It took them up six hours to get to the top of the mountain, where they lay all night; and next morning, when the birds were returned from their fishery, the Negroes repaired to their holes, with dogs trained up to the sport. Each Negro carried a switch in his hand seven or eight feet long, with a crook at the end of it; and, as soon as the dogs, which smelt at every hole, had discovered one with a devil in it, they barked, and began to scratch up the ground at the entrance; but they were prevented from doing this by the fowlers, who thrust their switches into the holes, on which the birds either fasten with their beak, and suffer themselves to be dragged out rather than quit their hold; or else the crook is turned round the hole till one of the wings is intangled by it, and so the bird drawn out by force. Our author adds, that by noon they had taken a hundred and ninety-eight of these birds, and acknowledges that he fed on them very heartily.

THE same father visited the next hill, called the sulphur mountain, the top of which he found bare, except that a little fern grew on it, and some sorry shrubs covered with moss; which he ascribed partly to the cold of so high a situation, and partly to the sulphureous exhalations. He
walked

walked round the hill three hours and a half, among burnt stones and whitish ashes, which in some places were above his ancles, and smelt strongly of sulphur. On the east side of the mountain he saw two mouths, one of which was an oval hole, about a hundred feet in it's greatest diameter; but he would not venture near enough to fathom the depth of it, because it now and then sent out black clouds of smoke, accompanied with sparks of fire. A little below the least and lowest of these mouths there are three little pools of very hot water, one of which is dark-coloured, and smells like iron, or rather like the water in smiths forges; the second is whitish, and has the taste of alum; the third is blue, and tastes like vitriol. The Negroes who sell brimstone fetch it from this mountain, the middle and lower parts whereof are quite different from the top, being covered with a pleasant verdure of tall trees and herbage, watered with many rivulets, and cultivated with all possible care and industry.

It is observable that the bees of Guadaloupe (and we suppose of the neighbouring islands) differ considerably from those of Europe in size and colour, as well as in the structure of their honeycombs, and the quality of their wax and honey. The bees are blacker and rounder than ours, but much smaller; nor do they seem to have any sting, or, if they have, it is too weak to pierce the skin. Their nests are in hollow trees, and their combs consist of little bladders of wax, of the form and size of pigeons eggs, but more pointed, and almost like the bladder of a carp. They deposit their honey in these bladders, which, though they may be easily separated from one another, are so artfully disposed and ranged, that there seems to be no vacuity between them. Most of the bladders are filled with honey, but in some of them there is a
yellow

yellow matter, feeded like the eggs of a fish, glutinous, and smelling like honey. The honey is always liquid, of the consistence of olive-oil, and never settles. The wax is black, or at least of a deep purple colour; and father Labat says, that all the art of his countrymen could not make it either white or yellow, so as to be fit for candles; besides that it is too soft for that purpose, and is scarce used for any thing but to cement the corks of bottles after it is thoroughly purified.

THE next island to Guadaloupe, belonging to the French, is Marigalante, which, according to Du Pleffis, is full of hills, and yields plenty of tobacco. Tertre says, that it has several springs of fresh water, and a large grotto with a river in it, which runs a good way under ground, and abounds with large crabs. He adds, that there are several other large and deep grottos in this island, which they call by the name of saints; and that for several miles along the coast there are vast high rocks, as even as if they had been cut by art, and as full of holes as a pigeon-house, which are much frequented by the tropic-birds already described.—Among the fish that are found about this and the neighbouring islands are the lamantins, or sea-cows, which bring forth two young ones at a time, and suckle them with their milk like calves. There is also a fish called recune, about eight feet long, that kills other fishes by its bite, which is said to be as poisonous as that of a mad dog.

WE now come to Martinico, one of the largest of the Caribbee islands, and the richest, best planted, and strongest of all the French island colonies in America. On the coast there are several fine roads, creeks, and harbours, and its forts are strongly garrisoned by regular troops from France; besides which they can muster a militia of ten thousand

sand fighting men. The middle of the island is full of hills, which give rise to several rivers, that sometimes overflow their banks, and carry away trees and houses. Some of these hills are cultivated, and others overgrown with trees, which afford shelter to wild beasts and abundance of serpents. Tobacco is planted on the sides of the hills, which is reckoned better than what grows in the valleys. The other produce of the island is much the same as that of Barbadoes, viz. sugar, cotton, ginger, indigo, aloes, &c. The coast abounds with turtle, which make a considerable part of the food of the islanders, who likewise eat a great many frogs and lizards.

HERE we might take a view of some islands belonging to the Dutch on the coast of Terra Firma; but, as they afford us nothing very remarkable, and we are unwilling to detain the reader about what is frivolous and not worthy his attention, we think it proper to put a period to our undertaking, wishing that every one who peruses it may be induced to love and adore the great Author of nature, whose works are wonderful, and whose power, wisdom, and goodness appear throughout the whole creation.

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